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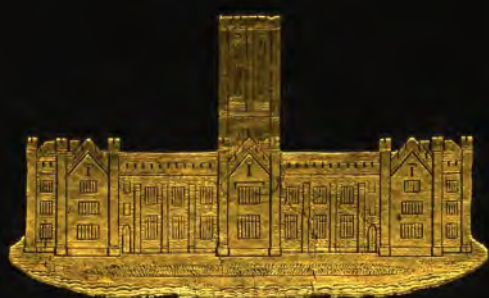
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*King William's College from the Groggins.*

THE  
ISLE OF MAN;

Its History, Physical, Ecclesiastical, Civil,  
and Legendary.

BY THE  
REV. JOSEPH GEORGE CUMMING, M.A., F.G.S.,  
VICE-PRINCIPAL OF KING WILLIAM'S COLLEGE, CASTLETOWN.



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TO  
THE RIGHT REVEREND FATHER IN GOD,  
THOMAS VOWLER SHORT, D.D.,  
LORD BISHOP OF ST. ASAPH.

MY LORD,

*I AVAIL myself with pleasure of the kind permission to dedicate this Work to you, both because it assures me of your still continued interest in this most ancient existing Diocese of the British Isles, in which you entered on the duties and responsibilities of the Episcopal Office, and also because it gives me an opportunity of expressing my own feelings of personal obligation to your Lordship, as well as those both owed and felt by every member of that Institution with which I am connected. Whilst many other proofs of your goodwill can never be forgotten, a special remembrance is entertained of that occasion when, through your energy*

*and liberality, King William's College was restored, and more than restored, from the ruins of a most destructive visitation. I am sure we have reason to thank God that He put it into your heart to take the lead in raising up again an Institution which was planned by the most loyal and unfortunate James seventh Earl of Derby, endowed by the liberality of your predecessor, both in this See and that which you now occupy, the pious Dr. Isaac Barrow, fostered by the assiduous care of the Apostolic Thomas Wilson, and established in its best estate by the labours and munificence of Bishop Ward, to be (as we hope) a perpetual nursery of sound learning and religion in this Isle.*

*I have the honour to subscribe myself,*

*My Lord, your Lordship's*

*Most humble and obedient Servant,*

**JOSEPH GEORGE CUMMING.**

## P R E F A C E.

---

THE following work originated in the desire expressed by some friends, whose judgement I value, that I would place before the public in a popular form the substance of my memoirs upon the physical history of the Isle of Man, which have appeared in the numbers of the 'Quarterly Journal of the Geological Society of London;' I was the more inclined so to do from observing that a deficiency existed on matters connected with natural history in all works upon the island hitherto published, and from finding that on one subject, its geology, peculiar circumstances enabled me to supply information not possessed by any other.

The most simple and popular method of communicating that information, as it appeared to me, was to transfer from my field-book the notes of the different geological traverses I have made during the last seven years in various parts of the island.

In doing this I could hardly pass by the spots rendered interesting by their connection with events in Manx civil and ecclesiastical history without some notice of them; and even the Fairy legends and Ghost stories, deeply inter-



woven with and illustrating the character of the native population, obtruded themselves upon my memory, and seemed not altogether unworthy of being perpetuated. My work has thus taken a somewhat wider range than I had originally intended. How far I have succeeded in throwing interest into a subject to all but geologists I fear very dry, I must leave to the reader to determine. I believe however that this little book will be found to contain a faithful summary of all that is really known of the past periods of the insular history, and that nothing is omitted which it is important a stranger should be made acquainted with in order that he may form a just estimate of the present condition and prospects of this island country. At the same time it presents a fuller itinerary than can be elsewhere met with ; and if I have deviated in some respects from the route generally taken by tourists, it is to draw attention to some peculiar features in Manx scenery which a casual visitor would be almost sure to miss, and with which even many residents are unacquainted.

For the geological portion of the book I myself am solely and altogether responsible. The memoirs previous to my own having been drawn up at a period when Geology was in its infancy, those who are acquainted with the rapid advance which it has made in late years will be prepared to expect some addition to those accounts in any work now published on the same subject. The maps and sections which I have made as they appear in this work, com-

pared with those previously existing, will show that these additions are considerable, as also the catalogues of fossils recorded from this locality, the number of which I have raised from about twenty to upwards of two hundred and fifty.

Mr. George Wood's account of the Isle of Man, published in 1811, contains the earliest geological notice of it, and is pretty accurate as respects the older rocks. Dr. Berger resided here a considerable time, and in 1814 a memoir of his was published in the second volume of the First Series of the 'Transactions of the Geological Society;' and this, together with a supplementary account by Professor Henslow in the fifth volume of that series, furnishes a correct view of the extent of geological information at that time possessed respecting the Isle of Man.

Dr. Macculloch in 1819, in his account of the Western Isles of Scotland (vol. ii. p. 516), made an addition to the previous notices; and an interesting memoir by Dr. Hibbert on the discovery of the *Megaceros Hibernicus* or Fossil Elk in the Isle of Man, will be found in the fifth number of the Edinburgh Journal of Science, published in 1826. H. R. Oswald, Esq., of Douglas, also published a pamphlet on the stratification of alluvial deposits in 1823. The only other and latest notice with which I am acquainted, is the extremely interesting paper on the Pleistocene formation of the north of the island, by Hugh Strickland, Esq., F.G.S., in the fourth volume of the Second Series of the Proceedings of the Geological Society, read November 2nd, 1843.

The materials for a General History of the island are apparently copious, but in reality very scanty, as a close examination will show that the majority of the numerous writers of later years have gone on borrowing from their predecessors without materially adding to the information previously possessed, and oftentimes without any acknowledgement. Tradition runs, that on the Scottish conquest of the island in 1270, Mary, the daughter of Reginald, last king but one of the race of Goddard Crovân, and lawful heir to the crown on the death of her uncle Magnus without issue, was secretly conveyed away with all the public deeds and charters, and that thence has arisen the dearth of records prior to that period.

It is a happy circumstance that the Chronicle of Man and the Isles, commencing at the period of the Norman Conquest of England, and continued to that of the Scottish Conquest of Man, written by the Monks of Rushen Abbey, has been preserved. It seems to have been conveyed at this latter time to the Abbey of Furness in Lancashire, of which Rushen was a dependent, and ultimately to have been deposited in the British Museum, where it now is. It was abridged by Camden for his history, and was also published, with an English translation, by Mr. Johnstone, rector of Maghera-Cross, in his '*Antiquitates Celto-Normanicæ*,' printed at Copenhagen in 1786. I have used a copy of the latter, belonging to the library of the University of Cambridge. I have not had an opportunity of closely comparing the two, though I took notes from an

old copy of Camden in the University library ; but it appears from Mr. Gough's edition in 1789 that they were printed from two different manuscripts, and he prefers that of Camden to Mr. Johnstone's, because in the latter the dates have been corrected in the margin by the editor ; but in Camden's manuscript itself they are correct. Camden begins with the death of Edward the Confessor in 1065, and Johnstone forty-seven years sooner. Camden's ends A.D. 1266, the Scottish Conquest, but has been continued by a later hand till 1316. Johnstone's copy ends in 1376, and contains some additional matter foreign to the history of the island. They are no doubt both ancient ; and I think it probable that after the removal to Furness a copy may have been made from that which Camden followed somewhere towards the close of the fourteenth century, and that this is the copy followed by Johnstone. The change of hand at the date 1266 in Camden's copy is extremely interesting, and seems to me an indication of its genuineness. James Chaloner, Esq., Governor of the Isle of Man under Lord Fairfax in 1658, and William Sacheverell, Esq., Governor from 1691 to 1696, have each left an account of the island of extreme interest, of which I have had copies by me continually in drawing up the civil and ecclesiastical history portion of this volume.

Through the kindness of Mark Quayle, Esq., Clerk of the Rolls, I have had the use of a manuscript in his possession, written at the close of the civil wars by a gentle-

man, an unknown author, who states that he retired hither from Wales during the troubles of that period. As I find the restoration of the island to Charles, son of James the illustrious seventh Earl of Derby, in 1660, recorded in the same hand as that of the rest of the manuscript, but the name of his successor William, in 1672, in a different hand, we must determine the date of this manuscript history between those two periods. I am inclined to think that this manuscript was used by Governor Sacheverell in his account; for he states in his introduction that "there is not one who has given any tolerable account of the isle except Mr. James Chaloner, Governor for Lord Fairfax, and the gentleman (who has not been so kind as to transmit his name to posterity) out of whose papers I have drawn the ensuing essay;" and on comparing Mr. Quayle's manuscript with Sacheverell's account, I find that in some places they agree almost word for word. This manuscript is well-worthy of being published: it was seen by Mr. Feltham, who refers to it in his *Tour through the Island*, published in 1798. In 1731, Waldron's description of the Isle of Man was published in folio: it is more a romance than a history, and abounds in some of the strangest legends of his day, and in vulgar abuse of the ecclesiastical rule of Bishop Wilson. Bishop Wilson himself drew up a short account, which appears in his works edited by Crutwell: it is very valuable as a faithful continuation of the former accounts, and gives a clear insight into the condition of the island in

his episcopate of more than half a century: I have found it extremely useful in many points pertaining to the ecclesiastical history of the isle.

Seacombe's 'Memoirs of the House of Stanley,' 1783, borrows largely from Sacheverell in the description of the Isle of Man, but furnishes valuable additional information, and is a useful book. There is also in 12mo a history of the island by Rolt in 1782.

Feltham's Tour in 1797-98 is a very faithful statement, and as the materials of it were collected in the various parishes with much personal labour, it is by far the most trustworthy of more modern accounts.

Mr. Wood's account, to which allusion has already been made, contains much information not elsewhere to be met with, and may be well studied.

We have also Quayle's 'Agricultural Survey of the Isle of Man,' drawn up for the consideration of the Board of Agriculture in 1794, and reprinted in 1811, and the 'Report of His Majesty's Commissioners for the Isle of Man,' 1792, both of them standard books of reference, as also are Mill's 'Ancient Ordinances and Statute Laws of the Isle of Man,' and a book entitled 'Isle of Man Charities,' published in 1831. Of Townley's Journal, Bullock's History, and Jeffery's Description, I can only say that perhaps it would have been better had they not been written.

The latest and most complete work is that of Mr. Train, in two volumes 8vo, in which he has brought together,

with much labour and research, a great variety of documents bearing on our insular history, and has elucidated from external records the more obscure portion lying between the fifth and tenth centuries, as well as checked the chronology of the Rushen Chronicle by comparison with the Norse Sagas and Irish Annals. For this portion of the civil history I have constantly referred to his account. It is to be regretted that in the later portion of his work he has not sufficiently distinguished between what is and what was, and that from his residing at a distance from the island he has been obliged to trust to the reports of persons not always the best qualified to give information : he has thus been unwittingly led into several grave errors.

I do not feel responsible for the orthography of Manx names, which never appear to have been fixed by any definite authority. The name of the island itself is variously written Man and Mann by the best writers and in public documents, in some of which we also find it written Manne. The first which I have adopted seems to be that in more general use.

As connected with the ancient history of the island, I have given at page 34 the date A.D. 947 to the building of Castle Rushen, from an oak-beam discovered in some repairs in 1815, in which it occurs in relief along with certain apparently very ancient characters. This is not to be taken as the date of the great central pile forming the keep, of which the architecture is of the twelfth century,

with some windows of later insertion, but of that portion of it which forms the Sally-port, which is plainly of more ancient workmanship. Some doubt has been expressed as to the genuineness of this date from the employment of the Arabic numerals. Mr. Hallam, in his Introduction to the 'Literature of Europe,' vol. i. p. 150, refers to a common literary tradition, ascribing the introduction of these numerals into Europe from the Saracens by Gerbert, near the close of the tenth century. It is however somewhat singular that we have another example to bring forward of the apparent employment of these figures in a very early record connected with the Isle of Man. In a note to the second canto of Sir Walter Scott's 'Lord of the Isles,' an account is given of an ancient chalice, bearing in Saxon black letter, very distinct, the following legend:—

“Ufo: Johis: Mich: || Agn: Principis: De: ||  
 Hr: Manae: Vich: || Liahia: Magryneil: ||  
 Et: Spat: Da: Jhu: Da: || Clea: Illora: Spa: ||  
 Fecit: Ano: Di: Jr: || 93a: Onili: Oimi: ||”

proposed to be read thus: “Ufo Johannis Mich Magni Principis de Hr Manae Vich Liahia Magryneil et Sperat Domino Jhesu Dari Clementiam Illorum Opera. Fecit Anno Domini 993. Onili Oimi.”—*Lord of the Isles*, p. 207, ed. 1833.

Some doubt has been thrown upon the genuineness of this inscription, inasmuch as there is no recorded Magnus Prince of Man of so early a date as 993. It is clear, how-



ever, that a question may be raised whether this date is read right, for only the Arabic figures 93 occur in the inscription, and the position of the (3r) leads us to presume it may have been misread for 92r (*Nostris*), or 99 (*Mille*); the date may perhaps be 1093, at which period Magnus Barefoot (as will be seen in p. 46, chap. 5 of this work) had seized upon and was actually in possession of the Land of Man. It has been supposed that both in the case of this chalice and of the carved oak-beam in Castle Rushen, the dates have been inserted at a later period. It may be so; the two circumstances are however worth recording; and it may be as well to note that there is some evidence that Arabic figures were in use before the method of calculating by them was understood; and it appears from a note in Mr. Hallam's '*Literature of Europe*,' vol. i. p. 150, that there is in the British Museum a manuscript (number 343 of the Arundel MSS.) which has been referred to the twelfth century by some competent judges, in which the author uses nine digits, but none for ten or zero, as is also the case in a MS. of Boethius. This I suspect is the case also on the chalice under consideration.

With respect to the date on a doorway in Castle Rushen, mentioned in p. 62, I have learnt that it is a forgery.

An interesting relic of Peel Cathedral is preserved, which I have not mentioned in the body of the work, viz. the remains of a painted window, in which, amongst other

devices, we have connected with the arms of Man the singular monogram of Matthew Parker, Archbishop of Canterbury. It is a valuable addition to the links which connect Queen Elizabeth with this isle; the others will be read of at pages 59 and 95. It is in the possession of the family of the late Clerk of the Rolls.

My thanks are greatly due to the President and Council of the Geological Society for their kindness in allowing me the use of the lithographic stones, from which have been taken Plates I. and II., containing the general map of the island and the southern basin denuded of the tertiary formations. The map of the southern basin, including the tertiary formations; the map of Poolvash Bay; the map of the island in 1595, and several new sections taken on different traverses at several parts of the island, together with some slight emendations on sections previously published, will, I hope, be found desirable additions to the geological portion of this work.

I am under great personal obligation to our leading geologists for the very kind interest they have expressed in the work, many of whose names appear as subscribers to it. Independently of their suggestions at various times in tracing out the geology of this area, the catalogues of fossils have been greatly increased by their kind inspection of the contents of my cabinet; in this particular I would mention with gratitude the names of Count Keyserling, the eminent States' Geologist of Russia; D. T. Ansted,

Esq., F.R.S. and G.S., Professor of Geology, King's College, London; E. Forbes, Esq., F.R.S., L.S. and G.S., Professor of Botany in the same University, and Palæontologist to the Ordnance Survey of Great Britain; and also of my friend John Morris, Esq., F.G.S., of Kensington. The late Mr. Gilbertson also, whose name is well known in connexion with the fossils of the Carboniferous limestone, did me great service in naming several species of Brachiopoda which I submitted to him.

My most grateful acknowledgements are still further due to Professor Edward Forbes for the very valuable paper which he has contributed to this work on the Flora of this his native isle. His labours in its marine fauna are already well known, both from his work entitled 'Malachologia Monensis,' and also the more extensive undertaking and most valuable volume, the 'British Starfishes.'

To the Board of Northern Lights, Edinburgh, and to their engineer, Allan Stevenson, Esq., an expression of my best thanks is tendered for the very liberal manner in which they have placed at my disposal the whole of their volumes of meteorological observations made at the Point of Ayr and Calf of Man Lighthouse during the last twenty-five years.

My thanks are due to my kind friend, George Kemp, Esq., M.D., of St. Peter's College, Cambridge, for a determination by analysis of the per-centage of lime in the Plei-

stocene marls of the north and south of the island. Edward Delamotte, Esq., Professor of Landscape Drawing in the Military College, Sandhurst, has my warmest thanks for the extremely faithful manner in which he has expressed upon stone the geological features of the country, and greatly added to the embellishment of this work. I have to acknowledge also favours of the pencil from my friend Alfred Lemon, Esq., and my quondam pupil Mr. Hugh Kewley.

My grateful acknowledgements are due to Mark Quayle, Esq., Clerk of the Rolls, as well for the use of the ancient MS. history of the island before noticed, as for much valuable information on legal subjects connected with the civil and ecclesiastical history of the isle.

I owe similar acknowledgements to many other gentlemen holding official appointments, and also to those connected with the different mining companies.

To the Venerable the Archdeacon and the Clergy generally, I tender my best thanks for the readiness with which they have answered my inquiries on many points connected with the Church of the Isle of Man.

F. C. Skrimshire, Esq., Her Majesty's Agent for the Woods and Forests, has furnished me with valuable details of that portion of the insular revenue with which he is connected. To the late lamented Robert M'Guffog, Esq., I am indebted for the return of the income and expenditure in the Customs' department.

Samuel Harris, junior, Esq., Tithe Agent for the Island, has most liberally supplied me with the details of the ecclesiastical revenue; and I am indebted for an account of the herring-fishery to Mr. James Mackenzie, officer of the Isle of Man fisheries.

In throwing so much matter into the Appendix, I have acted on a desire to remove as much as possible dry details from the body of the work, so that it might read as one continuous narrative. The Appendix, as it has cost me more labour, so it will be found to contain the most important information in the book. The headings of the chapters form a kind of general index to their contents. It may be desirable for those who are not interested in geological questions, to omit Chapters X. and XV.

J. G. C.

King William's College, Isle of Man,  
May 1st, 1848.

# CONTENTS.

## CHAPTER I.

	Page
Ancient legend of the Isle of Man—allegorical of its early history.—The interest which may be excited by the study of the physical history of a country.—General statement of the physical changes which have passed over the Isle of Man.—Geology not a mere speculative science, but an enunciation of established facts.—First view of the Isle of Man.—Erroneous impression as to its size; how produced.—Its varying appearance as presented at different points of the compass.—This variety produced by the varied action of certain physical causes.—The great natural agents which have modified the crust of the earth.—The records of the Palæozoic period in the Isle of Man.—Great gap between it and the Tertiary, as there developed.—The glacial epoch.—The more recent physical changes and present character of the Island . . . . .	1

## CHAPTER II.

Douglas Bay—Panorama on entering it.—The past and present condition of the town.—Rambles in its neighbourhood—to Baldwin, Kirk Braddan, the Nunnery . . . . .	12
---	----

## CHAPTER III.

Road from Douglas to Castletown.—Port Soderic.—Beautiful scenery.—Natural caves.—Intrusive greenstone.—Axis of elevation.—Transport of boulders.—Barrows and Cromlechs.—Action of drift-ice and icebergs.—The ancient condition of the Isle of Man as a chain of smaller islands.—Santon-burn, Ballalona, Fairies. . . . .	22
--	----

## CHAPTER IV.

	Page
The Sheading of Rushen.—General view of the southern area of the island.—The Eye of the Calf.—Spanish Head.—Port Erin.—Port St. Mary.—Ballasalla.—Rushen Abbey.—Castle Rushen.—King William's College.—Langness.—The great natural features of this Sheading.—Ellipsoidal hills of the boulder formation.—Great drift-gravel platform.—Valleys of denudation.—Estuary deposits.—Notice of the agriculture of the island.—Hints on drainage .....	32

## CHAPTER V.

Lucian's dialogues.—The physical constitution of Man.—The old Abbey-bridge.—Monks and mills.—The Abbey of Rushen.—Ancient tripartite division of insular tithes.—Present misapplication of the Abbey-third.—The Abbot stone of Rushen.—The Creggins Hill.—Drift-gravel platform.—Skybright.—Malew Church.—Recent changes in the level of the land .....	42
---	----

## CHAPTER VI.

The ancient Castle of Rushen.—The ramparts, the moat, the glacis, the keep.—Well in the drift-gravel.—The Derby family.—Bishop Wilson.—View from the castle walls.—The town.—The old chapel and clock-room.—Legend of the Black Lady.—Hango Hill.—Limestone blocks in the boulder clay.—William Dhone.—Skeletons.—King William's College.—Ancient foundation.—Advice of the Earl of Derby to his son.—Bishop Barrow.—The Isle of Man an ancient seat of learning .....	58
--	----

## CHAPTER VII.

Castletown Bay.—The Scraans.—The race-course.—Sir Isaac Newton.—Measures of time and space.—The measure of a man.—The former extent of the drift-gravel.—Time occupied in its erosion and in the formation of the Irish Sea.—Consideration of time arising from the composition of a gravel bed.—The circuit of Langness.—Trap-dykes, Bosses, Natural arches.—Round tower.—Porphyry.—St. Michael's Isle.—Ruined oratory.—The old fort .....	77
---	----

## CHAPTER VIII.

The port of Derbyhaven.—Its great natural advantages.—Singularly embraces in its circuit every rock and soil in the island.—The battle-field of Ronaldsway.—Great events of the thirteenth century.—The Scottish conquest.—Richard Mandeville, the Irish freebooter.—The lower limestone fossils of Ronaldsway.—Skillicore bosses.—Great disturbance at Coshnahawin.—Valley of Santon-burn.—M'Culloch in error	Page 96
--	------------

## CHAPTER IX.

View from the Brough.—Varying composition of the pleistocene marls.—Return to Castletown.—Notice of recent raised beaches at various points along the coast.—Remarkable undulations of the limestone beds at the Stack of Scarlet caused by the protrusion of basaltic rocks.—Glacial striations, groovings and indentations.—Mud glaciers not solving the phenomena.—Recent action of littoral ice at Cape Blomidon in the Bay of Fundy affording a clue to the true solution.—Probable gradual sinking of this area at the beginning of the glacial period	112
--	-----

## CHAPTER X.

The trap rocks of Scarlet.—Evidences of successive volcanic eruptions.—Great thickness of trappean beds.—Fossils of the trap-tuff.—The Posidonian schist interposed in it.—Probable extent and duration of the black marble quarries.—The economy of their working.—The Poolvash limestone.—Great abundance in it of the fossils of the Lower Scar limestone of Yorkshire.—Pleistocene beds at Strandhall.—Singular stalactitic concretions	122
---	-----

## CHAPTER XI.

Strandhall.—Submerged forest.—Has the land gone down or the sea come up?—The great fault.—Denudations.—Kentrangh.—The Giants' Quoiting-stones.—The Runic Cross.—Port St. Mary.—Perwick Bay.—Coast scenery.—Spaloret and the Chasms.—The Samphire-gatherers.—Spanish Head.—Rumpy cats.—The Calf Islet and Cow Harbour.—The city
--



	Page
of the Conies.—Bushel's house.—Boss of gravel in the Calf of Man.—Icebergs again.—Diluvium.—The legend of Kitter and the sword Macbuin .....	139

## CHAPTER XII.

Port Erin.—St. Catherine's Well.—Brada Head and Copper Mine.—View from Grammah.—Fairy Hill, Fleshwick Bay.—Manx peasantry, cabins, carranes, and Sunday blankets.—Origin of the names Lezayre and Arbory.—The Friary.—Upper limit of the boulder-clay.—Grenaby.—St. Mark's.—The Black Fort and Sir Walter Scott.—Granite blocks and Goddard Crovân's Stone.—Structure of granite.—Bubble of South Barrule.—Ascent of the mountain.—Evidence of great cataclysmal action.—Strike of parallel mountain-chains.—Mines and Minerals.—Slieauwhallin.—Witchcraft.—Tynwald Mount.—Ancient ceremonies .....	164
---	-----

## CHAPTER XIII.

Peel.—The Castle.—The Round Tower.—The Cathedral.—The Crypt.—Duchess of Gloucester.—Thomas Earl of Warwick.—The Guard-room.—The Moddey Dhoo.—Scenery about Peel.—Glen Helen.—The Rennass Waterfall.—Glen Darragh.—St. Trinian's Chapel.—Coast-road from Peel to Kirk Michael.—Geological features.—Glen Willan.—Kirk Michael.—Bishop Wilson.—Discipline of the Manx Church .....	187
--	-----

## CHAPTER XIV.

Bishop's Court.—The Grounds.—The Chapel.—Orry's Head.—Probable continuation of limestone series in the north of the Island.—Formation of the Curragh.—Ballagh.—Jurby.—Megaceros marl-pits.—Use of marl.—Overthrown ancient forests.—Ancient lakes.—Legend of Mirescogh.—Sulby Glen.—Snaefell.—The Bride Hills.—Admiral Thurot.—The Ayre.—Point Cranstal.—Grand development of Boulder series.—Ramsey.—Ballure Glen.—Sky Hill.—Port-le-Voillen.—Kirk Manghold.—The Holy Well.—Vision of Gîl Colum.—The Dhoon granite.—Laxey.—Orry's Cairn.—Cloven Stones.—Return to Douglas .....	207
--	-----

## CHAPTER XV.

	Page
Lithological character of the Isle of Man.—Granite Bubbles.—	
Great extent of schistose formations.—The Isle of Man existing as such in the Devonian period.—No disturbance between the Old Red conglomerate and Carboniferous limestone.—The lower and upper Limestone series.—Eruption of Trap rocks and interpolation in Carboniferous beds.—Great gap between the Carboniferous and Glacial deposits.—The Glacial epoch.—Subsidence and emergence of the Island.—Its present condition .....	237

## APPENDIX.

A. On the name of the Isle of Man .....	255
B. The Civil History of the Island, including an account of the Customs, Revenue, Receipt and Expenditure, with a Catalogue of Governors to the present time .	257
C. On the geographical position and extent of the Isle of Man, and its population at different periods .....	280
D. The Act of Settlement .....	284
E. Amount and distribution of the insular tithe .....	285
F. The Act of Surrender made by Reginald to the See of Rome .....	289
G. Account of James, seventh Earl of Derby, with a table of the genealogy of the house of Athol, so far as relates to the separation of the Isle of Man from the Derby Family.....	290
H. A detailed account of King William's College, Castle-town .....	300
I. On the per-centage of lime in the boulder clay formation	305
K. Mines, minerals and quarries .....	306
L. The Manx fisheries and the number of vessels of all kinds observed passing the Calf of Man and Point of Ayre in the year 1847 .....	311
M. On the Manx language.....	315
N. The Life of Bishop Thomas Wilson.....	322
O. Discipline of the Manx Church .....	334

	Page
P. Catalogue of the Bishops of Sodor and Man, with the origin of the See and its name . . . . .	338
Q. List of the Carboniferous fossils of the Isle of Man ..	354
R. List of fossils of the Pleistocene period . . . . .	359
S. On the Flora of the Isle of Man, by Professor E. Forbes	360
T. Meteorological tables compiled from the register kept at the Point of Ayre and Calf of Man Lighthouses. .	364

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### CORRIGENDA ET ADDENDA.

Page 51, line 1, *for* 1237 *read* 1265.

Page 62, line 5, *for* 1103 *read* 1011.

Page 149, foot-note, *for* Erithmum *read* Crithmum.

Page 286, *insert* Bradden glebe 30 acres. Also note that all the parishes are vicarages, excepting Andreas, Ballaugh and Bride.

Appendix Q. Since printing the list of fossils I have been able to make a slight addition to the catalogue of the Upper or Poolvash limestone series, viz.

*Pleurotomaria* Eliana, *De Koninck*.

*Cypridina* annulata, *De Koninck*.

*Daphnia* primæva (?), *M<sup>c</sup>Coy*.

I am also indebted to Professor E. Forbes for the identification of some fossils in my cabinet with the samples from the Irish Carboniferous series as figured by M<sup>c</sup>Coy in his 'Synopsis.'

*Chonetes* tuberculata (the *C. sarcinulata* of my Catalogue).

*Pecten* concavus.

*Pecten* fiabellulum (?).

*Platychysma* Jamesii (?) (the *Pleurotomaria* lineata of my Catalogue).

*Loxonema* impendens.

*Orthis* cylindria.

*Psammodus* porosus.

*Petalodus*, *uncertain*.

## DESCRIPTION OF THE PLATES.

---

### PLATE I.

1. General Map of the Isle of Man, coloured geologically, with a Table of Signs and Colours. The outer dotted line represents the coast at low-water; the continuous coast-line is high-water-mark.
2. General Section across the south-western part of the Island from Lhergydhoo, north-east of Peel, across the granite boss on South Barrule to Langness Point, south-east of Castletown.

### PLATE II.

Geological Map of the Limestone Basin and other parts of the southern district of the Island, as it is supposed they would appear if denuded of the gravels, sands and clays of the Tertiary period.

This Map exhibits the relations of the Carboniferous limestone to the Old Red sandstone formation and the great Schistose series of the Island, and the intersection and contortion of this area by igneous rocks.

### PLATE III.

In this Map we have included the Tertiary formations denuded in Plate II. The different shades of yellow and green represent the Boulder-clay, the Drift-gravel and the newest Marine and Fresh-water alluvium with raised beaches, and exhibit the formation of long valleys of denudation during a period of elevation of the

Island, and the manner in which some portions of the Tertiary series have been preserved by the peculiar arrangement of the palæozoic rocks.

#### PLATE IV.

Map of the Isle of Man in 1595, performed by Thomas Durham, as given in Camden's 'Britannia,' Speed's 'Chronicles,' Chaloner's 'History,' and Bleau's 'Atlas,' published at Amsterdam. It exhibits ancient lakes both in the north and south of the Island, which are now drained.

#### PLATE V.

1. Ground Plan of a portion of Poolvash Bay, as seen at low-water at the mouth of the streamlet which flows from Balladoole into the sea. It exhibits a remarkable series of Bosses on the surface of the limestone, caused apparently by the intrusion of trap rocks, which are abundant in that neighbourhood.
2. Section North and South magnetic in the above Plan across the Bosses, showing the undulations.

#### PLATE VI.

1. Ground Plan (coloured geologically) exhibiting the details of the Coast from Ronaldsway, near Derby Haven, to Coshnahawin, at the mouth of the Santon-burn, and marking the position of the faults, cracks and axes of disturbance connected with the elevation of the Brough, and the formation of a series of Bosses in connection with trap dykes along the axes of disturbance.

Sections 1, 2, 3 and 4 to the above Plan, are intended to illustrate the elevation of the Brough at the mouth of the Santon-burn, and the manner in which the Bosses may be supposed to have been formed by the intrusion of trap amongst the pebbles of the old red conglomerate. The letters of reference, O P, A T, S R, Q K, show the direction of the lines of section.

#### PLATE VII.

Various Sections exhibiting the arrangement of the different formations in the South of the Island, the intersection of the area by

dykes of trap and porphyritic greenstone, and the consequent faults and undulations of the surface.

1. Section from Brada Head to Coshnahawin, showing the denudation of the older rocks after the formation of the great faults and undulations, the deposit of the tertiary gravels, sands and boulder-clays on the abraded surface, and the formation of alluvial basins by the action of the sea, during a still subsequent elevation of this area.
- 2 & 3. Sections from the Mull Hills to Langness, and from Black Hill to Scarlet Head, illustrating the formation of the stratified trap-tuff with the included Posidonian schist.
4. Ground Plan, showing the ramifications of trap when traversing beds of the Old Red conglomerate on the eastern side of Castle-town Bay. See page 84 of this work.
5. Section near the Stack of Scarlet, exhibiting the contortion of the limestone and the trap-tuff by a second volcanic disturbance.
6. Section at the Calf of Man, showing the remarkable position of a mass of stratified gravel and sand at an elevation of nearly 400 feet above the present sea-level. See page 155 of the present work.

#### PLATE VIII.

1. Section in the North of the Island from the mountain range near Ballaugh to Jurby Point, showing the formation of the great Curragh and the freshwater marl basins, in which have been found the remains of the great Irish Elk.

N.B. The arrangement of the limestone and Old Red conglomerate is theoretical, as detailed in the body of the work, page 210.

2. Section through Hango Hill and King William's College to the Creggins, exhibiting the Cliff of Boulder Clay and the arrangement of the drift-gravel and alluvium.
3. Section at the mouth of Glen Willan, near Kirk Michael, showing a valley of denudation in the drift-gravel and boulder clay, with terraces of alluvium at different levels.

## ARRANGEMENT OF THE VIEWS.

	Page
View of King William's College from the Creggins, with Hango Hill, Castletown Bay and Langness Round Tower in the distance..... <i>for Frontispiece.</i>	
Distant View of the Island ..... <i>to face</i>	4
Runic Cross and Old Font in the Churchyard of Braddan, and Stone Coffin-lid at Rushen Abbey .....	20
The Creggins Hill from the Silverburn .....	54
Natural arch on Langness .....	88
Coshnahawin at the mouth of the Santon-burn.....	108
Castletown from the Stack of Scarlet, showing the contortion of the Limestone beds .....	124
Spanish Head from the Chasms .....	150
Peel Cathedral from Orry's Head .....	196
Portion of the Mountain range between Sulby Glen and Bishop's Court, as seen from Andreas Churchyard .....	222

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York, Philosophical Society of.

# The Isle of Man,

## Its History, Physical, Ecclesiastical, Civil, and Legendary.

---

### CHAPTER I.

Ancient legend of the Isle of Man—allegorical of its early history.

—The interest which may be excited by the study of the physical history of a country.—General statement of the physical changes which have passed over the Isle of Man.—Geology not a mere speculative science, but an enunciation of established facts.—First view of the Isle of Man.—Erroneous impression as to its size; how produced.—Its varying appearance as presented at different points of the compass.—This variety produced by the varied action of certain physical causes.—The great natural agents which have modified the crust of the earth.—The records of the Palæozoic period in the Isle of Man.—Great gap between it and the Tertiary, as there developed.—The glacial epoch.—The more recent physical changes and present character of the Island.

THE earliest native history of the Isle of Man is of a legendary character. It was thrown into the form of a popular ballad in the sixteenth century\*. It derives the name of the Island from Mannanan-beg-mac-y-Lheirr (little Mannanan son of Lheirr), an ancient king and famous necromancer, who is said to have preserved his

\* See Appendix, note A, and prefatory remarks.



kingdom from foreign invasion by the exercise of his magic art. At his bidding, the mountains rocked from their foundation, the sea boiled up from its lowest depths, volcanic fires, with sulphurous vapours and dense columns of smoke shot forth, and thick mists enveloped the Isle in an impenetrable mantle\*.

It may be permitted us, perhaps, to regard this strange legend simply as allegorical of the confusion and obscurity belonging to the early history of the Isle of Man, looming forth from a dark chaos, enveloped in thick mists of uncertainty and error.

There is however a history of the Isle far more ancient than any to which human archives can give access, a history inscribed on stone in ever-enduring characters by the finger of Him that was, and is, and is to come, upon which such darkness and uncertainty does not rest : this is its physical history. And to those who have the patience to study, and some earnest desire to make themselves masters of its various chapters, it will certainly be found by far the most interesting and instructive.

The wonders of necromancy which the legend unfolds have nothing to offer in comparison with the stupendous realities which the geologist is permitted to read out from the book of nature ; a volume ample and highly illustrated ; a volume, upon which when He looked on the day when it came forth fresh from His hands, and ere yet it was marred and blotted by man's sin, its great Maker pronounced very good.

The antiquary of the world turns to that chapter in its physical history which has reference to the Isle of Man, and he finds testimony given, in language which it is impossible to misunderstand, to the fact that it has been the scene of mighty events ; that it too, small as it may seem,

\* Chaloner's History of the Isle of Man, 1656, folio, p. 9.

has been (so to speak) the battle-field of the elements; that fire and water, heat and cold, have here met together and exhausted their fury, and have left behind them either entombed under gigantic mounds, or scattered far and wide over its naked surface, the tokens of their power, the fragments of their armour, and the skeletons of their hosts. He can produce evidence from this book to show that at one period the island heaved and tossed to and fro on a sea of molten lava, which poured forth over its surface through the rents formed during a time of convulsion, whilst volcanic ashes darkened the air, or buried, as in a living sepulchre, the inhabitants of the neighbouring seas. He can show that at another period vast waves desolated its fair surface, tearing up in their course the very rocks themselves, and depositing masses of granite on the highest mountain-tops. At one time he reads of a tropical climate with its luxuriant vegetation of lofty palms and towering tree-ferns adorning the land, whilst the sea around teemed with tropical life, the ever-active coral insect filling up the depths with its calcareous and many-coloured secretions, and the delicate nautilus plowing the sunny surface of the waters, and spreading forth its tiny sail to the genial influence of the primæval trade-wind. But time hurries on and hurries away all these fair seasons in its course, and he reads again how arctic storms, ravaged the coasts of the lovely isle, whilst an icy ocean girt it round, lashed its promontories and graved its shores with the weight of icebergs.

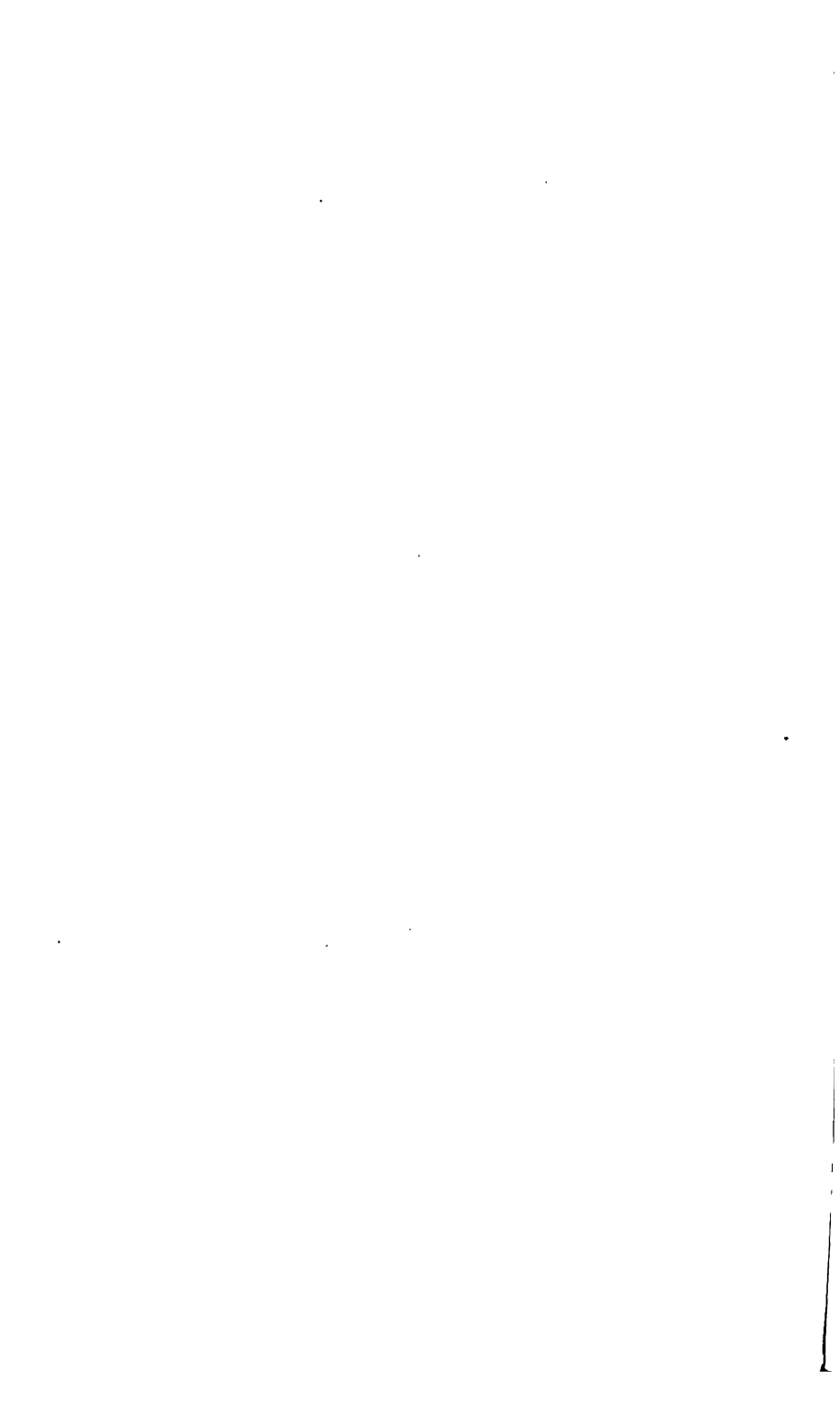
The geologist beyond doubt brings strange things to our ears, and he has so constant a habit of speaking disrespectful words concerning the age of our parent Earth, that no wonder if many of her dutiful children are offended at his statements, and some should affirm that he is wilfully uttering what he knows to be false.

And yet geology, rightly viewed, is no mere speculative science. It has for its object to discover and, if possible, classify *facts*, and by the strictest principles of analogy, to trace out the *cause* in the *effect*. In this latter branch it may happen that an insufficiency of data shall impart a measure of uncertainty to the argument as to *cause*; nevertheless these data are individual certainties in the mind of the geologist, and his real object (if sincerely devoted to his science) will henceforward be to search for phænomena additional to those already possessed, and not to discard as useless what he is already *assured of*, because it will not fully support him in the enunciation of causes which he deems only *probable*. And it is highly desirable that all who read a book which has to do with the structure of the earth or any part of it, should first of all be assured of the *reality* of the science on which the geologist is intent, and the *soundness* of those principles on which he claims the assent of his hearers or readers to the statements which he has to set before them.

I remember with a feeling of melancholy pleasure the first glimpse which I caught of the Isle of Man. It was from the summit of Helvellyn, which, though not the loftiest of the Cumberland mountains, presents views unrivalled by any of them. By my side stood a friend, as ardent an admirer of nature's beauties as myself, and who, in company with the devoted metropolitan of India, has since had opportunity enough of studying them in all the variety which the three presidencies of that mighty empire unfold, and who, almost alone and on foot, has penetrated into the heart of the Himalayah chain, and contemplated her grander features in the midst of habiliments of snow. The day had been one of storm and cloud, and promising no repayment for the toil of the ascent. All at once the dense canopy which rested on the mountain seemed lifted



*Distant View of the Isle of Man approached from the South East.*



up, and underneath it the scenery, in an atmosphere cleared by the recent tempest, came forth in its most impressive magnificence for miles around. After dwelling awhile in silent admiration on the sterner beauties of the nearer landscape, our eyes rested on the westerly sea, and there in the glory of a setting sun, floating as it seemed most tranquilly on the bosom of the great deep, lay the Isle of Man.

The peculiar form of the island\* causes it to lose in apparent magnitude when seen from a distance (especially from the sea) in a greater degree than is produced optically by simply receding from an object. The reason is this: the northern portion of the island is an almost plane area of nearly fifty square miles, of which the greater portion (and that portion more especially which is close upon the northern extremity of the mountain range) is elevated hardly more than sixty feet above the level of the sea. In receding therefore from the island, this area very soon sinks below the horizon, and the length of it is *suddenly* shortened by six miles when viewed from the south-east or north-west. Again, the more elevated portion shows very different phases as approached from different points. The distant *northern* view† is that of an abrupt pile of mountain rent into chasms, which the nearer approach shows us as lovely glens,—Ravensdale, Sulby Glen, Glenaldyn and Ballure. The *western* view is an extended mountain chain descending rapidly to the sea on the nearer side, more distinctly precipitous at the south-western extremity, and crossed at right angles by two valleys at Port Erin and Peel, by which the island appears divided into three. The *southern* view exhibits a gradual slope from

\* See the Plate, "Distant sea-view of the island as approached from the south-east."

† See the Plate, "View of the mountain range of the Isle of Man from Kirk Andreas."

the sea-level to the highest points with no distinct valleys or chasms, but occupied by towns, villages, villas, cottages, corn-fields and pastures. The *eastern* view shows rocky cliffs and bold headlands from 300 to 400 feet high, backed at the distance of seven or eight miles with mountains ranging from 1500 to 2000 feet above the sea, between which and the cliffs the slope is generally easy and clothed with verdant pasture. Now all these various appearances of the same mass, as viewed from different points, are in reality due to certain ancient agencies which it is one of the chief objects of the physical history of the Isle of Man to trace out, to classify and describe. It may be well, for the benefit of non-geologists, to state in this place a few of the leading truths of geology to which constant reference must be made.

There are evidently two *prime* agents always at work modifying the crust of the globe on which we tread, i. e. *water* and *fire*. The *former* has a constant tendency to *lower* the more elevated portions, by carrying down particle after particle and mechanically depositing them in the hollows, which would thus become ultimately filled up, and the whole surface of the earth be reduced to a plane; the *latter* helps to consolidate and harden into rocks\* the soft materials so deposited, and oftentimes again by the agency of those elastic forces which it generates, to break up and *elevate* them into hills and mountain chains. It is also pretty clear that whilst some rocks are thus deposited in horizontal layers by the action of water, others by the action of fire are poured forth in a molten or semi-fluid state from the bowels of the earth and over its surface, or having been once molten but cooled down into a solid state beneath the earth, have afterwards been forced upwards through it. Thus it has become convenient to divide rocks into two

\* The term rock however is applied *geologically* to all the materials of the earth's crust, hard or soft.

classes under the names *sedimentary* or *aqueous* (that is formed by *water*), and *plutonic* or *igneous* (that is formed by *fire*); it has also been observed that many of the sedimentary rocks have, by the continued action of heat and under great pressure, been altered entirely in their character and condition; to these the name *metamorphic* is applied.

It has also been determined that the different sedimentary rocks composing the surface of the earth have not been thrown together carelessly and without method, but there is a certain order so fixed and determined, that if in *one* part of the earth we find a particular rock B lying above another A, then in *every other* part we may expect to meet with the same arrangement, so that if we found A at the surface it would be useless to dig downwards with the idea that we should meet with B under it. And it has been further observed, that whilst the rock A contains in it the relics of a certain species of animals in great abundance, the rock B contains few or perhaps none of them, but has instead the remains of another species of animal which is wanting in A. Sometimes the difference between the remains of animals found in two contiguous rocks, A and B, is so great as to fix the idea upon our minds that all the animals which were living whilst A was being deposited having become extinct, or the last race of them having been destroyed by some sudden catastrophe, those found in B were entirely a new creation, called into existence by the Almighty Lord of life as more adapted to an altered condition of our globe. The study of these different remains (called fossils) belongs to the science called Palæontology, and a classification of the different rocks composing the earth's crust has been proposed in accordance with certain results obtained by that study.

Thus the oldest series of sedimentary deposits have been grouped together as belonging to the Palæozoic period\*.

\* *Old-life* period.



A newer series, containing as it would seem a new creation of animals, it has been proposed to name as belonging to the *mesozoic* period\*; and a still more recent class of deposits with another set of organized beings as of the *kainozoic* period†. The last of these is more generally spoken of under the term *tertiary* or *supercretaceous*; the last but one corresponds very nearly with the rocks generally classed under the older name *secondary*; and the third includes the remaining portion, which was formerly known under the terms *primary* and *transition*.

The physical history of the Isle of Man, as read from the characters graven on its surface, is after all but a book with its middle portion torn out and its preface a good deal injured‡.

The Palæozoic period, including the Silurian, Devonian and Carboniferous æras, the dynasties respectively of Trilobites, Cephalaspides and Megalichthys§, is fairly enough set before us, as respects bulk at least, and there are many deeply interesting chapters in it; but the Silurian portion has been so much knocked about and scorched by being placed in contact with a heated surface, that we have a difficulty in making out the division of the chapters, and can scarcely tell whether we have Upper Silurian only, or Lower Silurian only, or Upper and Lower Silurian together.

There is however no difficulty in distinguishing the Silurian from the Devonian or Old Red Sandstone æra. A great revolution ushered in those ages when the families of Cephalaspis, Pterichthys, Coccosteus and the Holoptychii held the supreme power. The older dynasty was com-

\* *Middle-life* period.

† *Newer-life* period.

‡ In explanation of this statement and the geological phenomena alluded to in the remainder of this chapter, the reader may refer to the concluding chapter of this work, which contains a summary of the geology of the island.

§ See "The Old Red Sandstone," by Hugh Miller.

pletely upset and broken in pieces, and its hardier members, after being rudely driven hither and thither and exposed to continued violence, were at length left to shift for themselves and to take their places as they best could in the new order of things.

Not such was the fate of their successors: though the earlier years of their empire seem indeed to have been years of turbulence and confusion, and there is no doubt of their having been a warrior race, yet the close of it, as far as can be gathered from Manx physical history, was of a peaceful character; and when a new constitution was called for, the sovereignty passed into the family of Megalichthys, either in consequence of failure in the reigning line, or because the altered character of its dominions was unfitted for the display of its peculiar endowments. And thus the Carboniferous æra began. For a lengthened period affairs were conducted with the greatest order and precision. The public records, as they are handed down to us, appear to have been very accurately made and carefully preserved, and we can trace out the events almost of every year in the exact order of their occurrence; and we have a good deal of information upon the peculiar habits and occupations of the different grades of society in a very densely peopled country. It is true that at first there was a little difficulty in arranging the elements of the new constitution, and affairs wore a dark and gloomy aspect. But after a time all settled down quietly, the coarser materials found their proper level, and peace, social order and industry everywhere prevailed.

At length, from some cause or other, evidently deeply-seated but never satisfactorily made out, a violent *émeute* took place; the entire fabric of society was broken up, and a succession of disturbances so convulsed this portion of the empire, that amidst the confusion caused by the con-

flicting masses, it is with the utmost difficulty we can trace out the order of succession. And here the great gap in our history occurs, and most unfortunate is it for the present prosperity of the island that it is so. A few stray leaves\* indicate that just at that time a deposit was being commenced here with an eye to generations yet unborn, which in other portions of the British dominions forms the true capital which has set agoing the manufactures supplying the world; the capital which has made Manchester and Leeds and Birmingham, and the other rapidly-increasing towns of the districts of coal.

We have here no record whatever of the *termination* of the Palæozoic period, and the whole too of the secondary series is wanting, as well as a large portion of the tertiary. We enter upon the history again merely where it just begins to end, and it is here also as much confused as where it was so suddenly broken off near the close of the Palæozoic period. But it is soon evident what vast changes have taken place in the physical character of the country and its inhabitants in the interval. It was then a land of warmth and sunshine and teeming with the vegetation of the tropics, we come upon it again as a land cold, dreary and desolate, a treeless and barren waste. But another chapter opens, and it speaks of this region as one of lakes and plains; of plains stretching out and uniting it with England, Ireland and Scotland, over which ranged and reigned the mighty Megaceros†. And then is ushered in another period, still a period of change, a period of sinkings and risings again, a period when noble forests of oak, elm and pine,

\* The fossil plants in the Posidonian shale of Poolvash.

† Generally known under the term Irish Elk; it ought to have been called Manx Elk, or *Megaceros Monensis*, as the first described specimen was found in the Isle of Man, and the remains are abundant for the size of the island.

clothed the mountain sides and adorned the valleys and plains, and Mona again became an island. And last of all comes our own æra, in which the woods have disappeared, the lakes one after another have been drained\*, and smiling corn-fields occupy in their stead, and the reign of the beasts of the field and fishes of the sea has given way to that of him who was created and made to have dominion over all.

\* See Plate IV., Map of the Isle of Man in 1595, performed by Thomas Durham, as given in Camden's 'Britannia' and in Speed's 'Chronicles.'

## CHAPTER II.

Douglas Bay—Panorama on entering it.—The past and present condition of the town.—Rambles in its neighbourhood—to Baldwin, Kirk Braddan, the Nunnery.

WHAT a magnificent bay is this of Douglas ! how deep the azure which rests upon its waters ! Few scenes can be more impressive than that presented to the stranger on his arrival by steamer on a clear calm summer's eve, either from Liverpool or (the more natural communication) Fleetwood. Thirteen or fourteen hours\* since he may perhaps have been in London, or he may have just fled from the smoke and din of Birmingham, or Manchester, or Leeds.

The shape of the bay he will observe to be nearly that presented by the concave arc of the moon when three days old. The southern horn (the left-hand one to him at entering) runs out into the sea as a mass of clay schist dipping inland at a high angle, and surmounted by the light-house. A little further in, near and under the battery†, he may observe some violent contortions of the strata, and between that and Harold Tower perhaps his eye may catch a sight of a small patch of gravel a few feet below the level of the battery ; this is a remnant of the

\* A person leaving the Isle of Man at ten o'clock in the morning will ordinarily be in Liverpool in time for the express train which reaches London at eleven o'clock the same evening.

† This battery was erected in 1813, at which period also was removed one of the most interesting relics of antiquity of which the island had to boast, the ancient Pictish tower which stood at the bight of the Pollock Rock, the former entrance to the harbour. See Appendix, Note B.

northern drift, a very ancient though not the last upraised sea-beach. In the south-western area rests the tower of refuge\*, an extremely picturesque object, and in case of shipwreck on the dangerous reef (the Conaster rock, or St. Mary's Isle) on which it stands, a precious point of safety for the mariner. The headland at the northern extremity of the bay is Banks's Howe, a favourite resort of the Douglas people when an autumnal sun has mellowed the heather on the mountain sides. The distance between the extreme horns of the bay will be about two miles.

A continuation of the bold coast two miles north-east of Banks's Howe (interrupted only by the sweet little haven of Growdale, where a streamlet comes tumbling down from the White Bridge near Onchan) terminates the scene with Clay Head.

In the foreground we have the town of Douglas stretching along the south-western edge of the bay. The old town, in the form of a triangle, occupies the low ground at the mouth of the river on the level of the last raised sea-beach, the pier† (with its light-house) and St. Barnabas church being the most striking objects. The more elevated localities have in later years been seized upon by the better classes for their habitations and for the lodging-houses of strangers, and a new town has thus rapidly grown up of a more respectable character, and this from its position being more conspicuous than the more ancient one, happily impresses the visitor on his approach with a very favourable opinion of the spot. The Odd Fellows' Hall, St. George's ‡

\* Erected in 1832, mainly through the exertions of Sir William Hillary.

† The first stone of the pier was laid on July 24, 1793, by John Duke of Athol. Its length is 520 feet, and breadth 40 feet. The cost of erection was £22,000.

‡ Built in 1780.

Church, and the House of Industry\*, stand out as the more prominent objects in the upper town. Along the shore to the north we have the new church of St. Thomas†, the only modern building on the island which can pretend to an ecclesiastical character.

Above this a fine terrace of the northern drift is being rapidly occupied by a superior class of residences, commanding a magnificent view of the bay and the environs of Douglas. Rather more to the north we have Villa Marina, and then as the most conspicuous object almost in the centre of the crescent of the bay, in a line direct from the light-house through the tower of refuge, stands out Castle Mona, formerly the residence of John Duke of Athol, whither he removed from Port-e-Chee, but now converted into a first-rate hotel. A little further northwards the continental traveller is reminded strongly of the Rhine castles, by the castellated and highly picturesque pile on the Falcon Cliff.

Perhaps a well-practised eye may perceive a few yards to the northward of the Falcon Cliff that the claret-coloured schist, on which the castle stands, dips at a high angle nearly south by east, and has but a very thin capping of the drift gravel. The series is well-developed in a quarry hard by, where the road turns up the hill to Kirk Onchan, and shows, as contrasted with the dip of these schists on Douglas Head, that the town lies in a synclinal depression. Strathallan Crescent forms an interesting feature in this portion of the bay, where the shore begins to curve to the north-eastward; and in the same division of the panorama we can include Derby Castle, though standing a little apart within its own grounds to the eastward.

The upper portion of the same field of view will take in

\* Built in 1837.

† Commenced in 1846.

a pretty fragment of the village of Onchan\* perched on the rise of the hill, with its heavenward pointing church spire relieved against a richly-wooded background,—a combination not too frequently falling under the eye of the painter in the Isle of Man, where trees are few and far between.

Such is the foreground in the panorama of Douglas Bay, owing much perhaps of its present attraction as a watering place to the hand of man†, but still most truly enchanting in its own undecked naturalness. In fact, the mind of him who is a true admirer of the beauties of Creation reverts *at once* to the time, scarcely more than a century and a half ago, when Douglas, a fishing-hamlet in the parish of Kirk Braddan, sent up on a still summer Sabbath-eve its curling wreaths of turf-smoke from the little group of fishers' cots which nestled in the western angle of the bay, whilst fathom upon fathom of herring nets lay drying around upon the sand-hills, since occupied by a ducal palace and aristocratic mansions, and he will ever love mentally to linger on such a scene.

Well! let him then even *now* lift up his eyes to the further off landscape in the distant mountain chain. Let us suppose the station a mile or two out at sea, so as to permit the line of view clear over Douglas Head and the nearer eminences. 'Tis evening; stretching away to the right and left, from seven to eight miles inland, as far as the eye can reach in a line almost parallel to the south-eastern coast, the glorious panorama of mountain peaks stands forth in clear relief against the western sky. We have said *peaks*, but their outline generally speaking is too soft and rounded fairly to claim that term‡. A mellowed

\* Dedicated in honour of St. Concha, the mother of St. Patrick.

† See Note C, Appendix.

‡ A good idea of their form may be gained from the "Distant sea-view of the Isle of Man as approached from the south-east."



light streams through the gorges and deeper central valley which cleaves the island in twain from Douglas to Peel. The dark heather on South Barrule and Bein-y-Phot, the longer we gaze looks darker and darker still. The loftier mountain-range, though continued onwards with a gradual depression towards Brada Head, the Mull Hills, and the Calf of Man, seems to terminate in the south-west with Cronck-na-Irey-Lhaa (the hill of the rising day), reaching 1400 feet above the sea-level, its eastern face smoothed down and every cavity apparently filled up. A glance at the geological map\* will show that the tertiary deposits, here consisting of boulders, sand and clay of the pleistocene age, stretch far up the mountain side. They might perhaps under the term *diluvium* be continued to the very summit, for even to that height we find boulders of granite evidently detached from the boss on the eastern side of South Barrule, and rolled forward in a south-westerly direction. The western face of Irey-na-Lhaa descends almost perpendicularly into the Western Sea. It is the leeward side, so to speak, of the mountain barrier opposed to the drifting current from the north-east.

Carrying the eye onward towards the north, the next summit is South Barrule (the top of the Apple), a noble mountain as seen from any side, the King of the South, rising 1545 feet above the sea-level. The intervention of Mount Murray takes off somewhat from its grandeur as seen on entering Douglas Bay. The same may be said perhaps of Slieuwhallin (the Hill of the Whelp), the next mountain to the right descending (at its northern extremity) with extreme abruptness into the vale of St. John. The northern slope of that valley ascends far more gently to the summit of Greebah, which presents to the southern view the appearance of a truncated pyramid.

The ridge continues now with a slight depression towards

\* Plates I. and III.

the north-east, affording a pass across the chain from Baldwin to the Rennass Valley. And now further to the north, having passed another prominent point, we can just scan the head of the Baldwin valley in the deep recess of Injebreck, a lovely wooded retreat on a hot summer's day, where the clear dew-drops come trickling down in a silver thread from the grassy slope betwixt Garraghan and Snaefell to form the Glas (the *grey* water), which rolling onwards through the Baldwin valley and joining the Dhoo (the *black* water)\* near Port-e-Chee (the Harbour of Peace), forms with it the Douglas river from which the town takes its name.

Standing forward from the more regular chain of mountains, we have next Garraghan and Bein-y-Phot, whose elevation above the sea is respectively 1520 and 1750 feet. Then falling back upon the line to the north is the monarch of Mona, Sneafell, 2004 feet in height; and the ridge is further extended north-eastward, terminating in the conical point of North Barrule, which frowns down upon Ramsey, the metropolis of the north, and sends forth at its base a series of lesser ridges on every side, like the gnarled and twisted roots of some gigantic old oak. In the ravines thus formed are the sylvan retreats of Ballure and Glenaldyn. Maughold Head, rough and precipitous, forms the extreme north-eastern termination of the great mountain chain, as seen from the entrance to Douglas Bay, and shuts up the further view of the island in that direction. It should however be rather considered physically as a more salient point of a secondary chain to the south-eastward of the former principal one.

It is a hard and ungracious task to advise people in general of a line of tour in such a country as Mona's fair isle. There are so many various points to be considered

\* It rises in the turf bogs of the central insular valley.

in the matter; the *time* at the disposal of the visitor is a prime consideration; regard must be had to the *different energies* of the *invalid* travelling in his easy carriage in search of health amidst the valleys, and the *able-bodied* pedestrian who is prepared to scale precipices and inhale the keen air which plays around the mountain-top. Regard must be had to the *antiquarian* intent on Runic monuments, Kist-vaens and Cromlechs, ruined churches, cathedrals, monasteries and castles; whilst the *naturalist* will feel anxious to have his attention directed to those localities which present the best specimens of the objects on which his mind happens to be just now particularly engaged.

But in writing for the *geological* tourist, we need not hesitate in advising the course he ought to take, whether it be by days or weeks that he is to reckon his stay. *He* must go almost at once to the south of the island, where he will find the whole physical history of the country developed in the geological study of the Sheading of Rushen. Yet, if he can spare a day, he may devote it first to the neighbourhood of Douglas, in an examination of the valleys in which flow the streams originating the Douglas river. He will there (especially in Spring valley) fix his attention on the terraces of drift-gravel, the indication of successive elevation of the area of the ancient sea-bottom of this neighbourhood. He will perceive that in former times an estuary ran up into the country to Port-e-Chee (the Haven of Peace), and that it has been drained at a period, geologically recent, by an elevation which is probably the last affecting materially the physical condition of the island; and he may find some reason perhaps for the supposition, that a movement, then commenced, has been quietly proceeding even down to the present time. He may even extend his day's excursion beyond Port-e-Chee, a few miles

into the Baldwin valley, and perhaps reach Injebreck\*; and all the way he will be struck with the masses of gravel, sand and clay through which the streamlets from the mountain's dashing and foaming have cut their way, and formed many a romantic glen which he will refer in great part to the period of the boulder-clay deposit. And the general tourist, who cares nothing for the geological questions involved, may well accompany him in this day's ramble, for he will pass through scenery which for quiet and secluded loveliness is hardly to be equalled anywhere in Mona. And why should he not include in it the Kirk yard of Braddan†? sweet shaded holyspot! How do pensive solemn thoughts steal over us there; and scenes of bygone times flit rapidly before our imagination as we sit upon the western stile, itself an ancient, misplaced and perverted Runic monument! Would that it were the only misplaced holy stone in this churchyard, but, *proh pudor!* in the midst of it, under the open sky, is the good old square font, plain and simple, 't is true, but yet of *honest stone*, and hallowed to many a generation, now crumbling to dust in the yard around. It was turned out of the church‡ to make room for a pew not many years ago. A small basin

\* The *general* tourist should be advised to visit this spot, and he may from Injebreck easily ascend Bein-y-Phot and Sneafell.

† St. Brandon (in honour of whom the church was dedicated) is said to have been an Abbot and Confessor, who died a recluse in the Isle of Arran towards the close of the eleventh century. In the year A.D. 1292, Mark, Bishop of Sodor, held here a synod, in which were enacted thirty-six canons for the government of the church. The present church of Braddan was built in 1773.

‡ There is scarcely a church on the island which retains its ancient font within the church. The fonts have been ejected for the most part within the last twenty years, and appropriated to various nameless uses. Mostly they are cut out of insular granite blocks without any attempt at ornament, and probably they are very old.

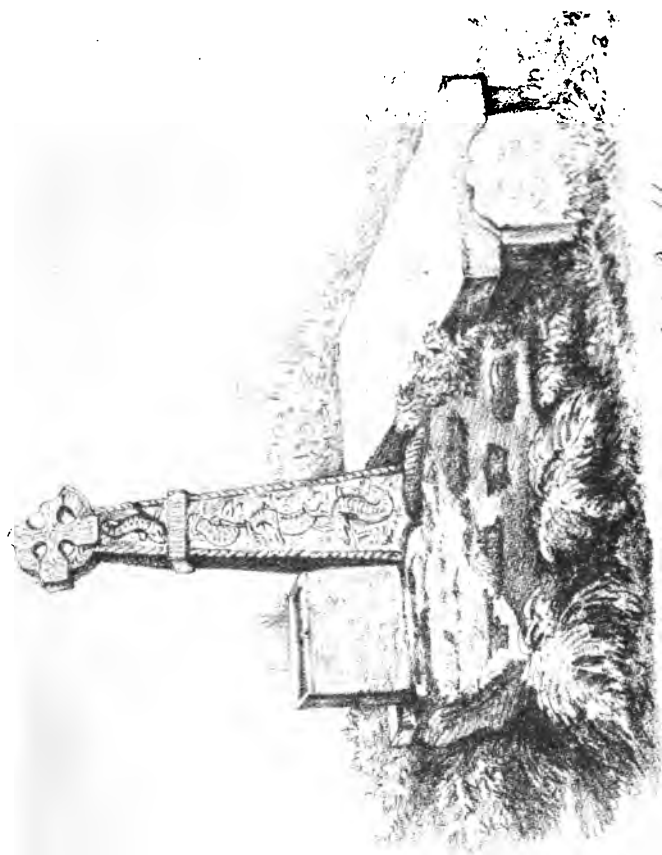
upon a wooden pillar within the altar rails is intended to do duty in its stead.

Above this old square font is one of the finest Runic monuments of the island, its length 5 feet 4 inches, the shaft adorned with figures of dragons or monstrous animals intertwined together. Along its edge is an inscription\* in Runes, the interpretation of which has greatly puzzled antiquarians. If we look about we shall find two other Runic monuments, one leaning against the church tower on the southern side, the other built in as a lintel to one of the windows of the tower. But we must away.

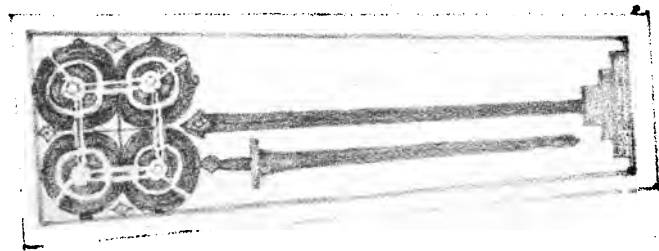
Let us take the road which leads through the richly-wooded grounds of Kirby and Ballaughton, and coming out upon Spring Valley, we may saunter leisurely down the streamlet which falls into the Douglas river below the Nunnery. Let us look upwards now to those embattled walls which perch on the summit of the rock, or peep forth from the denser foliage which mantles round its base. These are not the very identical walls in which the venerable Prioress of Douglas used in the olden time to hold her baronial courts, exercising a temporal as well as a spiritual discipline over her own vassals. They, for the most

\* It was copied for Gibson's Camden upwards of a hundred years ago. The best figure of this cross is given in the *Archæological Journal of the Archæological Institute of Great Britain and Ireland*, vol. ii. p. 75. The two readings which have met with the greatest favour seem to be those of Mr. Beauford and Mr. Just; the former reads it thus:—"Durlifr nsaci risti krus dono aftiac sunfin frudur sun safrsag;" and translates it—"For Admiral Durlif this cross is erected, by the son of his brother (the son of) Safrsag."

The latter reads it—"Thurlior : Niaki : Rasti : Krus : Thono : Aft : Fiak : Sini : Aruth : Ur : Sun : Taors : " and translates it—"Thurlior Niaki raised this cross for his—Aruth ur, son of Jaor." We have given a view of the Runic cross and the ancient square font as they stand together in the Auld Kirk Yard.



*View in the Churchyard of Braddan.*



*New Griffin, St. Dunstan's Abbey.*



part, have long since passed away; and it would be difficult to trace a vestige of monumental stone (even in the eastern wing, which has a pretension to greater antiquity) which we might venture to pronounce as fashioned and wrought to take its place as part of that ancient house which St. Bridget is said to have founded here in the sixth century\*. But still there is an impressiveness about the building, and we can hardly help feeling a desire to know more of its earlier history, and to trace its influence, if possible, upon a rude people in a troublous age, and observe how it stood forth as a home of civilization and of true religion, a real Port-e-Chee, a refuge to the weak and peaceful in times when every man's hand was against his fellow.

\* St. Bridget was born in the year 453, and at the age of fourteen years received the veil at the hands of St. Patrick. In 484 she founded the nunnery of Kildare; about the same time a monastery was founded under the same roof; and this illustrious and immaculate lady presided both over the nuns and the monks till the time of her death in the year 523.—*Wood's History of the Isle of Man*, p. 113.



## CHAPTER III.

Road from Douglas to Castletown.—Port Soderic.—Beautiful scenery.—Natural caves.—Intrusive greenstone.—Axis of elevation.—Transport of boulders.—Barrows and Cromlechs.—Action of drift-ice and icebergs.—The ancient condition of the Isle of Man as a chain of smaller islands.—Santon-burn, Ballalona, Fairies.

IN proceeding from Douglas to Castletown, we have the choice of two routes, one lying along the eastern coast by Oakhill, Ballashamrock, and through the parish of Santon, which was the old road, another running over the higher ground more inland by Mount Murray, which is that now generally traversed. The former seems to have been abandoned in consequence of the deep gulleys which were crossed by it, over which it was deemed too expensive (in a country where no tolls are taken) to throw viaducts; but it was a great mistake to carry the new one in its present direction over two very steep and long hills (Middle Hill and Richmond Hill), through a country in great part wild and dreary in the extreme, and where good road materials are scarce; a middle line might have been adopted nearer and easier than either of the others, taking the old road as far as Ballashamrock, thence through Oatlands into the new road, near the half-way-house; and then from the foot of the hill, where the old and new road join about three and a half miles from Castletown, the road might have been continued by Ballahick and the Creggins, nearly in a straight line, and avoiding a very wearisome hill. It is not too late yet to adopt this route, and public rather than

private interests will be consulted thereby. In this case it would be desirable to bring into use the masses of tough greenstone which lie scattered along the surface almost the whole way, than which there can hardly be a better road material.

For the sake of the scenery, the pedestrian or horseman may well be advised, even now, to take the old road entirely, and carriages may adopt it in part by turning off from it by the by-road which runs through Oatlands and connects the old with the new Castletown road, about half a mile south of Mount Murray. At this point, where the by-road meets the new main-road, it will be well to pause and take a view of the south of the Island. The immediate neighbourhood, as has just been mentioned, is remarkably bleak and barren, consisting of cold clay lands, formed by the degradation of the subjacent schists. Scarcely a tree can be seen, and such as *are* seen convey the idea of nature holding out wretched signals of distress. Immediately to the westward, at the distance of four miles, rises South Barrule, looking black and frowning towards the south-west, seemingly supported to the right and left by its twin body-guards Slieuwhallin and Ireyna-Lhaa; whilst directly in front, above St. Mark's and the mining ground of Foxdale, rises a fine granitic dome, studded with disintegrating blocks of that rock, and spangled near the summit with masses of white quartz. South Barrule thus reminds us of an overgrown school-boy with a frosted plum-cake in his lap. We catch from this point also a glimpse of the Calf of Man and Spanish Head, with other of the more remarkable promontories; and turning more to the south, we observe the tower of King William's College standing out as a striking object at the head of Castletown Bay.

But the traveller on foot or on horseback, as has just

been mentioned, may well keep on the old Castletown road, and examine the different glens which run down to the sea. They are full of interest, and will well repay a visit in detail. Descending to the sea-shore below Ballashamrock, we come upon Port Soderic, a secluded and exquisitely lovely inlet, into which, at its south-western recess, the streamlet from Mount Murray makes its way, cutting through the beds of the boulder-clay formation, which we may commence studying here, where they have been sheltered from denudation in the interior of the little bay. The schists which form the horns of the bay rise at a high angle\* inland, and there become contorted; and this is apparently due to the intrusion of masses of greenstone†, which run hence in a direction nearly west magnetic, and throw the beds into an anticlinal along an axis in that direction, the traces of which are discernible in various creeks‡ along the shore for several miles towards the south of the island, and more especially at the mouth of the Santon river, near Coshnahawin Head. The action of the sea at different levels upon the schists which have thus been disturbed, and the formation of a series of water-worn caves penetrating the lines of fracture, are highly deserving of study by the geologist; and the artist will find here many a pretty gem for his sketch-book, and the lover of nature many of her wildest features for his contemplation. Here are the favourite haunts of the sea-fowl; and when a storm has been spending its fury on these rugged cliffs with a heavy

\* At the caves they dip S.  $10^{\circ}$  E. magnetic at an angle of  $35^{\circ}$ .

† I have not as yet been able to discover the outburst of the greenstone at Port Soderic, though I have little doubt of its existence in this neighbourhood, from the numerous blocks on the surface to the south-west of the bay.

‡ In Sea-field harbour the strike of the disturbance is N.  $82^{\circ}$  W. magnetic, or nearly magnetic east and west.

swell rolling in from the north-east, their wild screaming, mixed up with the roaring of the billows in the rocky caves and deep gullies, and the dash of the foaming surge upon the pinnacles of schist which stand out here and there into the sea, forms a concert of discords wonderfully impressive and heart-stirring. And so again are we soothed into a kind of romantic melancholy when not a breath stirs the waters, and the only sound is that of the lap-lapping of the wave, and its faint echo against the sides of the picturesque cavern on the quiet influx of the tide, mixed with trickling of water from the roof and the splash of the little neighbouring cascade which comes tumbling down fifty or sixty feet and mirrors a rainbow from the morning sun; and there is the gentle bleating of the sheep on the crag above, and the plaintive cry of the curlew, which has made its nest in some rocky cranny along the shore: and then to look down into the clear deep azure pools and watch the finny tribe there disporting themselves, and tempting lobsters and crabs peeping forth from their holes, and all the beautiful variety of algæ waving to and fro in the briny swell; where can we see these things in greater perfection than in Mona? Who that loves such scenes will not hasten to enjoy them here?

The next principal inlet to the south of Port Soderic is Seafield. It is a fine open bay with rocky caves on the north side; and from the south side we have a good view of a wooded valley running up for some distance inland, and we have a continuation of the same geological phenomena, and consequently the same scenery as at Port Soderic.

On the way we must have observed here and there constant accumulation of greenstone blocks on both sides of the road, but specially to the westward, and we shall have little doubt as to the direction in which many of these have

come. We shall find them in considerable numbers as we ascend from Seafield towards the church of Kirk Santon, and especially to the south-west on the summit of the hill. We cannot help noticing the circumstance that a very large use has been made of these boulders in the formation of the so-called druidical circles, which are, or rather were, so abundant on the island.

The antiquary, when treating of the mechanical powers employed in bringing to their present position on the tops of hills these magnificent masses of stone, in an age when machinery must have been of a very simple character, seems sadly to have overlooked the fact of their having been in many instances a *geological* deposit left ready to hand frequently on those very spots where we now see them, brought thither (shall we say it?) by the carrying power of ice which grounded and melted on those summits when the glacial sea was at a higher level relatively to the land than it now is. It is not necessary in each case to presume that the masses of ice thus transporting rocks were of such a size as to be strictly speaking *icebergs*; the position of the blocks may very frequently be accounted for by the simple supposition of their having been frozen in amidst packed ice or mixed ice and snow\*, which was afterwards broken up, forced along shore by the action of powerful currents, grinding down and smoothing in many instances the subjacent rocks which lay in the main passages or tide-ways (and may we not in this way account for the vast accumulation of gravel, sand and clays in the lower portion of the boulder formation?), and again often stranded and forced inland in the form of packed ice by the action of stormy waves, and upon the deliquescence of the ice forming vast piles of detrital matter with mixed angular

\* Mr. Darwin has cited some admirable instances of such phenomena in his recent travels in the Southern Hemisphere.

and rounded blocks, according to the condition in which those blocks were when frozen into the ice. And both angular and rounded blocks may have become scratched and marked with furrows in their passage from one locality to another whilst held tight in their icy matrix; and this is the condition in fact in which we mostly meet with masses of rock in this formation.

Perhaps in considering the boulder series on the Isle of Man, we may hold as a general rule that those accumulations which consist entirely or in most part of insular rocks, have been so deposited by *shore-ice*, and on the other hand we may attribute to the carrying power of icebergs those small boulders, and even large accumulations of boulders and gravel, which have a foreign aspect, and are plainly travellers from a more distant region.

In discussing too the question of the action of shore-ice, packed-ice, icefloes, and icebergs in the formation of the boulder deposit in this neighbourhood, the true physical condition of the country relatively to the sea-level at that time ought to be taken into consideration. We must remember that when the land was depressed and the sea reached higher up the mountains, we should have presented to us a chain of islands separated by very narrow channels\*. The fearful rapidity with which the current at certain

\* In a French work published in Paris last year, entitled 'Recherches sur les Glaciers, les Glaces Flotantes, les Dépôts Erratiques, &c.,' the author (Mons. Jules Granges) brings forward evidence to show that the inferior limit of perpetual snow descends lower in islands than peninsulas, and in peninsulas lower than on continents; and he comes also to the conclusion, "que dans les climats insulaires, où les températures moyennes sont assez élevées et où cependant les températures estivales sont très douces, les glaciers présenteront le plus grand développement possible; ce sera précisément le contraire pour les climats continentaux." The bearing of these statements on the origin of the boulder formation is very interesting.

points in the ebb and flow of the tide (aided also by particular winds) rushes through the Sound of the Calf or Kitterland Strait at the present period, is a matter of notoriety, and has not unfrequently been a cause of the loss of small vessels which have ventured through, and of human life. When in addition to this channel there was one from Port St. Mary to Port Erin, from Poolvash Bay to Feswick Bay, from Douglas to Peel, and perhaps from Peel by Kirk Patrick to Glenmoy, and from Port Lewaigue to Port Moor, thus forming, as it would appear, most probably seven islands and islets, the destructive power of conflicting currents charged with icebergs, icefloes, and drift-ice, bearing in their under surface, or mixed with them, fragments of porphyry and other hard rocks, will readily be granted, and we shall be prepared to allow an extensive degradation of the shores, and a continual ploughing up of the sea-bottom in these channels.

Let us now travel onwards, descending from Kirk Santon Hill to the Santon-burn, which taking its rise a little south of the Foxdale mines at the foot of the granitic boss on South Barrule, flows down a wild and picturesque valley hardly ever visited, but certainly claiming and well rewarding the detour of a few miles which the pedestrian may make up it. At various points up this valley, as in the Baldwin before-noticed, we shall find the streamlet cutting its way through masses of the boulder clay, which may be very finely studied here in the terraces which impend the stream on either side. Here and there the valley opens out and forms rich alluvial meadows, which a proper system of drainage would convert into most valuable land, but which is too often permitted to be so constantly under water as to produce little else than luxuriant crops of rushes. The geologist cannot fail of being struck with the singular grouping of blocks in this stream, the mixture of insular

granite boulders from the north-westward with the boulders of greenstone from the north-eastward, as well as with foreign rocks. The former have been brought down from Barrule by the stream swollen with rain or melting snow, or (it may be) in ancient times by a glacier, the latter have tumbled out of the boulder formation wherever the stream has undermined a bank and claimed its contents for a prey.

The road from Douglas to Castletown crosses the Santon-burn at a very pretty point. There is a charm in the very name of the spot, *Ballalona* or Fairy-bridge. It is not often now-a-days that we can meet with persons not ashamed to own their belief in the existence of the good people, and still more seldom is it that we can extract affirmative testimony of eye-witnesses to their tiny pranks upon the green sward. It would be a mistake however to suppose that the minds of the Manx peasantry are uninfluenced by a superstitious feeling of reverence for the fairy elves, and for places which tradition has rendered sacred to their revels. The superstition has with them its use, it causes them to keep good hours; and in some parts of the island it would be difficult to prevail on a native to stir out after dark alone. Yea, it is said, that on dark, dismal and stormy nights, up in the mountain parts of parishes, the tender-hearted peasants retire earlier to rest, in order to allow to the weather-beaten fairies the unmolested and unwatched enjoyment of the smouldering embers of their turf fire. In the olden time the stories of their appearance to different parties were very rife. Waldron has preserved a goodly number, which no doubt he has largely garnished out of his own fertile and marvellous brain. Here is one. "A farmer belonging to the parish of Malew was journeying across the mountains from Peel homewards and missed his road. Presently the sound of soft and flowing music



reached his ears, on following which he was led into a magnificent hall, where he observed seated round a well-garnished table a goodly number of the little people, who were making themselves merry with the comforts of this life. Amongst those at table were faces which he fancied he had certainly seen in times past, but took no notice of them, nor they of him, till the little people offering him drink, one of them whose features seemed well-known to him plucked him by the coat tails, and forbade his tasting aught before him on pain of becoming one of them and never returning to his home. A cup filled with some liquor being put into his hand, he found opportunity to dash its contents upon the ground. Whereupon the music ceased, the lights disappeared, and the company at once vanished, leaving the cup in his hand. By the advice of his parish priest he devoted this cup to the service of the church, and I am told (says Waldron) that this very cup is now used for the consecrated wine in Kirk Malew."

Lord Teignmouth, in his sketches of the coasts of Scotland and the Isle of Man, makes the observation that the Manx retain many superstitious notions common to the other branches of the Celtic family, and in proof of it mentions a conversation which he had with his guide on the occasion of his visit to the island. The guide stated that about six years before that time a troop of fairies had appeared to a man of Laxey, who being intoxicated began to abuse them, but they wreaked their vengeance on him by piercing his skin with a shower of gravel. The catastrophe did not terminate here; for lo! next morning his horse died, his cow died also, and in six weeks he himself was a corpse. The brief hint of intoxication in the above case leads us to suspect that there was somewhat of truth as well as shrewdness in the suggestion of a certain local Wesleyan preacher, that the fairies had been seen taking

their departure from the island in empty rum puncheons, and scudding out of Douglas Bay with a fair breeze for Jamaica.

Whilst on the subject of fairies, which our passage of Bal-lalona has evoked, it may be well to notice here that the Manx, as well as their Scottish and Irish congeners, have, in reference to the distribution of erratic blocks, by the help of the invisible race cut the Gordian knot which has long tortured the patience and tried the ingenuity of geologists. Many of these piles of stones, as well as the single blocks of stone which are perched upon eminences, are attributed to the labours of a certain evil genius, termed by them "phynnoderree," a kind of reprobate or outcast fairy, who for his sins was transformed into a shaggy Satyr, with long flowing goat's hair and cloven feet. An instance is related of a certain farmer in the neighbourhood of Sneafell, who, being about to build a house, collected on the seashore a goodly pile of boulders. There was however one enormous quartz boulder on which his heart was specially fixed, but which no human art could remove from the spot. In one single night the phynnoderree is stated to have transferred, not only this stone, but many hundred loads of the collected boulders to a distance of many miles inland, in proof whereof the erratic quartz rock is to this day pointed out, where it lies on an elevated spot on the mountain side.

## CHAPTER IV.

The Sheading of Rushen.—General view of the southern area of the island.—The Eye of the Calf.—Spanish Head.—Port Erin.—Port St. Mary.—Ballasalla.—Rushen Abbey.—Castle Rushen.—King William's College.—Langness.—The great natural features of this sheading.—Ellipsoidal hills of the boulder formation.—Great drift-gravel platform.—Valleys of denudation.—Estuary deposits.—Notice of the agriculture of the island.—Hints on drainage.

A HUNDRED yards south of the junction of the old and new road to Castletown and the road leading up to Harrisdale Farm, we reach the top of the last hill on the road from Douglas to the metropolis of the Isle of Man. Six hundred yards further brings us to a cottage on the right-hand side of the road; a most desirable spot for taking a bird's-eye view of the structure of this southern area, and we may very well at this point enter upon the geology of the Sheading of Rushen. The stream we have just crossed (the Santon-burn) forms its north-eastern boundary from the sea inland to the very source of the stream at the Foxdale Mines; thence to the north and north-west it is bounded by a curved line running over South Barrule (a little to the westward of its summit), and thence over Ireyna-Lhaa into the sea. It thus takes in the loftiest mountains of the southern division of the island, the great masses of schist in all the varieties here existing, the remarkable granitic boss near Foxdale, the old red sandstone fringing and underlying the basin of the carboniferous deposits, the limestone itself (the older beds of Ronaldsway and Port-St.-Mary, and the newer series of Poolvash), the trap-tuff of Scarlet Head, and the trap dykes and greenstone

dykes which in different directions cut up the area; it includes the rounded hills of the boulder formation, the terraces of drift-gravel, and the still newer and most interesting series of marine and freshwater alluvia which occupy the southern valleys. In fact we have the entire geology of the Isle of Man itself brought within a reasonable compass in this single sheading. And here let us see what it is made of.

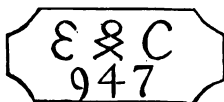
We are looking down upon an elliptical area of somewhat irregular outline, the extremities of whose major axis we may consider to be Coshnahawin Head in the north-east, and Port St. Mary in the south-west. The outline of the area to the north-westward of this axis is formed by the mountain chain, which from its *general* direction from N.E. by N. to S.W. by S. curves round towards the south as it approaches the Calf of Man. We cannot see the Calf of Man from this point, but we catch a glimpse of the Eye of the Calf, which appears as if united to the main island. Spanish Head presents a bold front to the sea, and was till within the present year an overhanging precipice of more than 300 feet; it is surmounted by the Mull Hills. A gap (in which lies Port Erin) intervenes between these hills and Brada Head, which has a front to the west not less imposing than Spanish Head. Port Erin itself is hidden by one of the nearer eminences, over which peeps Brada Head to the south-westward. A second gap to the northward (in which lies Fleshwick Bay) separates Brada Head from the great mountain chain which terminates in Ireena-Lhaa. Port St. Mary is conspicuous with its white-washed houses and the smoke of its limekilns to the north-westward of Spanish Head in a snug corner of Poolvash Bay. It is the most southern hamlet on the island, situated in the parish of Kirk Christ's Rushen, whose village church, if it had a very tall spire, we might perhaps distinguish

over the hill in a line between us and Port Erin; and the same line would pass nearly over Arbory Church, and rest upon the venerable abbey of Rushen, the ruins of which lie down in the valley here about half a mile from us amidst that mass of foliage; we can just see two of its gray and ivied towers peeping out from amongst the elms which surround it. It is a spot full of solemn associations, the resting-place of kings, bishops, abbots and holy men.

O! quis verendorum admonitus sacros  
Temnit locorum?

This at our feet is the village of Ballasalla, the largest in the island, and even within the last fifty years of sufficient importance to have a Deemster's Court held in it. And there two miles beyond on the western edge of its bay is Castletown itself, clustering round the ancient pile of Castle Rushen, which the Danish Guttred\* erected nearly nine hundred years ago,—a noble specimen of fortification, scarcely inferior to that of Elsinore, which it greatly resembles. Wisely did that Scandinavian hero choose the material of his castle from the crystalline limestone of this imme-

\* In Johnstone's Jurisprudence, page 13, it is stated that Castle Rushen was built by Guttred in 960, but in some repairs of the Castle in 1815 an old oak beam was discovered, bearing the following characters:



The central letter appears to be a combination of the Mæso-Gothic **X** (o) and **X** (ch.). The date 947 is supposed to be the æra of the reign of Guttred, second prince of the line of Gorree, who acquired the island in the tenth century; Guttred is said to be buried within the Castle. Cardinal Wolsey, who was guardian to the young Earl of Derby, is generally supposed to have planned and caused to be erected the glacis, of which there is a portion remaining on the east and south sides.

diate locality. After more than eight centuries and a half of war with the elements, after the sieges\* with which by man at various times it has been beleaguered, it looks as fresh and entire as its neighbour, King William's College, raised from the same quarry not the seventh of a century ago. To be sure the latter has undergone the ordeal of fire, which has left somewhat of a more sombre and gray tinge of time upon its tower than would otherwise have been the case, yet even before that calamity appearances were not greatly in favour of the junior building. The reason in fact why both have suffered so little from the severe tests through which they have gone, is that the stone has been (so to speak) annealed in the quarry in ages long gone by, the great mass of molten trap with which the limestone is in contact at Scarlet-point having in cooling imparted to the latter rock (of which the College and Castle are built) a crystalline and enduring nature. It is strange that with such a specimen as Rushen Castle before them, the architects of Douglas Pier and Castle Mona should have gone across the water to England and to Scotland for a much worse material, a material too which does not harmonize so well with the character of the scenery with which Douglas is surrounded.

But to return to the landscape now within the field of view. Malew Church peeps forth in a gap between the Creggins and Ballahot, and St. Mary's Church in Castletown is seen to the south-eastward between the castle and the bay. To the north of the town on the rising ground stands Lorn House, the present residence of the Lieut.-Governor. The old and new pier, the latter unfinished, are hid from view by the intervening buildings. Altogether the view of Castletown from this northern point

\* "In the year 1313 King Robert Bruce beseiged this Castle." Feltham, page 274.

is imposing, and gives the idea of greater extent than is the reality. The foreground too is good and sets it off to advantage; it appears to stand almost at the opening out of a finely cultivated valley into a noble bay, penetrating three miles inland, and being two wide at its mouth; the northern shore (the head of the bay) is relieved of the tameness it would otherwise have by the College, which forms, with its central tower rising more than 100 feet from the ground, a conspicuous object of a cathedral character. The basaltic pile of Scarlet Stack at the western side, and the peninsula of Langness on the eastern side of Castletown Bay, with its round tower near the southern extremity\*, will next catch the eye; and then to the north of the narrow neck of land which joins Langness to the main island, lies the quiet fishing hamlet of Derbyhaven, with its retired and lovely bay. Ronaldsway, an ancient mansion and battle-field, and a favourite resort of the geologist, to the north of Derbyhaven, is hardly hid by the trees and rising ground of Ballahick, a property which lies down here to the left-hand on the opposite side of the valley from Ballasalla.

But the great natural features of this southern area have as yet been hardly dwelt upon.

The immediate neighbourhood is a low undulating country, presenting a series of rounded hills† rising from 100 to 200 feet, whose seaward front is a curved line from Coshnahawin Head towards Kirk Arbory. The most prominent are the Brough and Ballahick Hill on our left,

\* The fort and ruined church at the northern extremity of Langness (or rather in the island of St. Michael, which is connected with it by a breastwork of stone) are concealed at this point by the hill above Ballahick.

† See the Map of the Southern area, including the tertiary formations, Plate III. and Plate VII., section 1.

Ballahot on our right, westward of Rushen Abbey, and directly in front and trending westward, the Creggins Hills, Skybright (near Malew church) and Ballown. If we examine closely into the general direction of the axes of these ellipsoidal hills (the osar of Swedish naturalists), and of the short valleys or depressions between them, we shall see that it is parallel, or nearly parallel to the direction of the great mountain chain. It is also coincident, or very nearly so, with the direction of the scratches and groovings on the surface of the subjacent rocks whenever they can be discovered. The composition of these hills is the gravel, sand, and clay of the boulder or pleistocene formation; the points where it is best seen being in the banks of the Silverburn, below Ballasalla, near the Creggins, and again to the westward of Skybright. The lower portion will be found the more loamy, and of the colour of the subjacent rock, of which also it generally contains not very rounded but much-scratched fragments. The middle portion is generally sandy, with small rounded pebbles and boulders chiefly of foreign rocks; the upper portion is still more gravelly, but it is on the surface generally, and also on the higher ground that we fall in with the largest boulders, whether single or in patches.

Direct attention again to the further-off landscape between these rounded hills and the sea as far as the eye can reach. It may be described as one great terrace of gravel rising gradually inland from twenty-five to sixty feet above the sea-level, with an indistinct appearance of a series of lower terraces or raised sea-beaches down to the present sea-level. But the whole area of these terraces is cut up by a succession of valleys of denudation, which have evidently been occupied at one time by the sea as estuaries\*,

\* See the Map of the Southern area of the island, including the tertiary formations, Plate III. and Plate VII., section 1.



but which are now receiving constantly the alluvial deposits which the streams from the mountains bring down and spread forth in them. If we examine the outline of the coast and the materials of which it is composed, we shall discover certain causes which have operated in producing the present physical appearance of the lowlands. We shall see that Langness Point, Scarlet Head and Balladoole Hill, present to the south masses of tough, igneous and crystalline rocks which very powerfully resist denuding action, and which have acted as breakwaters against that action coming up the Irish Channel. We shall see also that the drift-gravel lies along and is preserved over the ridges of the undulations which have been impressed upon the subjacent limestones. Indeed so much so is this the case, that we might easily fall into the error that the limestone has been thrown into these wavy ridges since the deposition of the boulder clay series and drift-gravel; and some of my earlier sections across this basin favoured that supposition. A closer examination, and the finding rolled fragments of the trap, whose eruption caused the undulations of this area, in the boulder formation, showed such an hypothesis to be incorrect\*.

When the sea flowed over these low barriers of the hard palæozoic rocks before the land had risen to its present elevation, it would wash the base of the rounded hills of the boulder series which have been spoken of as lying on a curved line from Coshnahawin to Arbory, beating up into the valleys between them, and doubtless causing the removal of large portions of the looser materials of which they are composed, transporting them to a greater or less

\* This remark must not be taken so as to exclude the probability of *any* disturbance having affected this area since the boulder clay deposit, as there is very good evidence of some disturbance, but in a different direction.

distance according to their different specific gravities and the strength of the currents. The great terrace of drift-gravel was evidently the sea-bottom of that period, and its contents have in great part been derived from the boulder formation. The great features of these lowlands are therefore plainly attributable to the denuding action of the sea-waves during the elevation of the island, and the resistance presented at various points by the superior hardness of the rocks subjacent to the tertiary formations; and the rounding also of the lower hills of the boulder formation may in part, perhaps, be attributed to a similar action. Yet it seems not improbable that *their* contour had been impressed upon them previous to the elevation, when they lay as banks at some depth beneath the surface of the glacial sea, which we have evidence on the Isle of Man was relatively with the land 400 feet at least higher than it now is\*.

Presuming that the action of the currents would then be influenced as now by the coast-line, and that they would have the greatest force in directions parallel to it, tide-ways, *i. e.* submarine valleys, would be originated and maintained in those directions, and thus the apparent connection between them and the great axis of the island (which gave the form to the coast-line) would be established and exhibited on the subsequent elevation of the sea-bottom. It is further to be observed that the scooping out of these valleys would be aided materially, were the currents passing through them charged with icebergs, which there is good reason for believing to have been the condition of the sea at that period.

Of the agricultural character and capabilities of this

\* See my memoir on the "Geology of the Calf of Man," published in the Quarterly Journal of the Proceedings of the Geological Society of London, in May 1847, p. 184.

southern area, it may be well to say a word or two before we leave this *point d'appui*. It is evidently the garden of the island, and altogether under the plough, and the advantages of soil and position for obtaining cheaply the most valuable ingredients for its improvement are extremely great; yet it is only of late years that any attempts at systematic and scientific farming have been made. We may attribute much perhaps of this state of things to the fact of the farms having been broken up into so many small holdings, and the great deficiency of capital. To carry on therefore any general and effectual system of drainage was next to impossible, even if individual farmers had been so disposed. The gravel terraces and the lower rounded hills of the boulder formation admit of very easy drainage; but this is not the case with either the cold clay uplands which rest upon the schist and granite, or the alluvial valleys which have been scooped out of the drift-gravel; and the consequence is that these are even yet under very partial and imperfect culture. The uplands are not very promising 't is true, yet individual instances of industry have shown that a profitable return for labour may be obtained even from them; and this more especially by the simple act of draining carried on with judgement through a series of years, even with very limited means. In every part of this sheading lime may be had within a distance of four miles; the great wonder is that it has not been more largely used.

But the case is different with respect to the valleys which open out immediately upon the sea. Their extreme moisture is owing to several causes, each of which requires a separate treatment.

The denudation of the drift-gravel has originally taken place down to the lowest bed of the tough boulder clay, in many cases through the clay down to the inferior lime-

stone. The dip of the limestone towards the sea is generally at an extremely low angle, and in some places again it is horizontal, at others raised up into bosses.

The valleys have again been in part filled up with estuary deposits of marine sand and fine gravel, as well as with the detritus brought down by freshes from the mountains. These deposits are in most instances only a few feet thick. Hence the waters from the uplands after excessive rains accumulate in the valleys, overflow the river courses, saturate these sands and gravels, and are only ultimately carried off to the sea by an extremely sluggish natural drainage.

But there is another additional cause of their moisture. The rains which fall on the gravel terraces which inclose the valleys, sink through the gravel and sand till they come down to the boulder clay. This is almost impenetrable, and the water prevented from descending further is thrown out on each side into the valleys, and the consequence is that just at the foot of the gravel terraces, where they fringe in a manner the valleys, there is a constant accumulation of moisture producing peat, moss, and rushes. One deep drain on each side of the valley would take off the springs at their head, but I am not aware of any instance in which this system has been adopted. Should the present hint be acted upon, it will afford an opportunity of testing the soundness of my views as to the structure of this area, and be an instance of the practical application of geology to the interests of agriculture in this particular locality.

## CHAPTER V.

Lucian's dialogues.—The physical constitution of Man.—The old Abbey-bridge.—Monks and mills.—The Abbey of Rushen.—Ancient tripartite division of insular tithes.—Present misapplication of the Abbey-third.—The Abbot stone of Rushen.—The Creggins Hill.—Drift-gravel platform.—Skybright.—Malew Church.—Recent changes in the level of the land.

IN one of those admirable dialogues by which the heathen Lucian so forcibly ridicules the vanity of human wishes, and exhibits the instability and utter nothingness of those things which the greater mass of mankind are toiling after and grasping at, he introduces the fabled ferryman of Styx in colloquy with Mercury\*. They have piled Ossa on Olympus, and Pelion on Ossa, and have mounted atop. The aged Charon however soon discovers that by this elevation he has only gained a loss. He wished to become acquainted with man, to get a closer insight into his constitution, but he has raised himself so far above him as utterly to defeat the purpose for which he came from the depth of Erebus. He proposes therefore to the active conductor of the shades, that they should descend at once and visit one by one the different localities likely to afford him the choicest information. It is natural enough that we should express a similar wish with his, though the elevation from which we have been contemplating the physical constitution of Man has nothing to compare with the triple mountain height to which Charon toiled.

Geologists are accused of very grovelling habits; they are said to be always burrowing under the earth; they pro-

\* Lucian's Dialogues,—Οἱ ἐπισκοποῦντες.

fess to pry deeper into millstones than other people. Be it so; they have a mission to fulfil, and humble though it may appear to many, they are quite contented with their vocation, and heartily labour at it. Let us descend. The geologist has been studying hitherto from his elevation only the great outline of this portion of Man; he wishes now to trace out in detail the individual features, each limb and member, yea, to mark each vein and artery through which flowed that igneous fluid\* which once agitated and fashioned the entire frame. He does not, 't is true, in this immediate neighbourhood of Ballasalla fall in with those trap dykes and masses of greenstone which have disturbed and broken up this part of the island; for the whole of the palæozoic series is covered up with the tertiary formations, except where the action of the mountain streams upon the boulder clay has laid bare the subjacent rocks, or the limestone has been sought after by the quarriers for economic purposes. There are, however, close by this ancient village (and in fact running through it) some traces of a disturbance of the older rocks which appears to be connected with the great elevation of the mountain chain.

Just above the Abbey of Rushen is a very old bridge, how old it would be hard to tell; it appears in the earliest maps of the island†, and it is sketched by Camden‡ as a remarkable object in *his* day. It is impassable by any vehicle except a wheelbarrow, and indicates a time when packhorses were alone used for the transport of men and their chattels. The neighbours know it by the name of

\* This lower area, as will be shown, is cut up with dykes of trap rock, the irruption of which seems to have contributed to the minor features of the country. See page 39, *supra*.

† See Map of the Isle of Man in 1595, Plate IV.

‡ It is also given in Chaloner's History, 1656.

the Crossag. Just above it is a mill-dam, whose original fabrication we may well believe to have been by the monks of this abbey. How frequent a concomitant the mill is to the religious houses of the Cistercian order is well known, and as they, in the Isle of Man, were the special almoners of the poor, there is surely good reason for persuading ourselves that it has not been by mere accident that in this locality the abbey and the mill are so closely connected. There is the same evidence of design in the contiguity of a mill with the Friary Bowmaken in Arbory, an offset from this abbey of Rushen. We have it again in the mill hard by the nunnery of St. Bridget, near Douglas.

Now betwixt the mill-dam and the bridge, if we look down into the river, we shall see that the beds of limestone are twisted up and set edgeways along a line of fault which just in this place crosses the stream in a direction N. 10° W. magnetic; but as the stream (the Silverburn) makes a turn westward a little higher up and coincides then with the line of fault, we may thus trace it upwards towards the mountain chain, and observe that in this direction the disturbance increases in value, and is at right angles, or nearly so, to the great line of elevation of the mountain chain. The uplift is on the southern side, and at Athol Bridge, a mile hence up the Silverburn, is about 100 feet. Here, however, at the Crossag Bridge it is very small, and probably dies away entirely a little south of Ballasalla. The cross fracture again which runs at the back of the abbey garden to the westward, has brought up to view the old red sandstone from under the carboniferous limestone in a very interesting condition. It does not present to us its ordinary red colour, but pebbles of white quartz in a gray matrix of limestone, and includes the characteristic fossils\* of the lowest limestone series as

\* Particularly "*Orthis Sharpei*."

seen elsewhere in this basin. Perhaps we may trace the passage more distinctly from the Devonian into the Carboniferous series a little higher up the hill, on the road-side near Ballahot Farm House. If we now follow the Peel road from this latter spot, we shall observe just on the brow of the hill before descending to Athol Bridge, the lower beds of the conglomerate with their ordinary red colour resting unconformably on the upturned edges of the subjacent claret-coloured schists, whilst on the other hand, we can easily trace by the Ballahot quarries hard by, the regular passage of the gray-coloured conglomerate into the dark limestone and shales of the lower carboniferous beds.

Whilst sauntering near the venerable ruins of the Abbey of Rushen, let us muse awhile on its history.

The statement of Sacheverell, that it was founded by Macmarus\* in 1098, appears to rest on uncertain authority. That period was one of great confusion and desolation in the Isle of Man.

Goddard Crovân, or Chroubân (white-handed), the Icelandic Chief, in 1077 had defeated the Manks under Fin-gall their king at Ramsey and gained possession of the isle. He reserved the southern portion to himself and followers, and granted the northern to the inhabitants on the terms that none of them or their heirs should ever presume to claim any part of it by way of inheritance†. He

\* "Macmarus, a person of great prudence, moderation and justice, in the year 1098 laid the first foundation of the Abby of Rushen in the town Ballasalley; these monks lived by their labour with great mortification; wore neither shoes, furs, nor linnen, eat no flesh except on journeys. It consisted of twelve monks and an abbot, of whom the first was called Conanus. I find the Cistercian order to have its first beginning this very year, though probably they were not planted here till six-and-thirty years after by Evan, Abbot of Furness."—Wm. Sacheverell's Account of the Isle of Man, published in 1702, page 33.

† Note D, Appendix. The Act of Settlement.



in turn was overthrown by Magnus, the piratical king of Norway, who having overrun the western isles and part of Scotland, seized upon the Isle of Man in 1093. Magnus shortly after returned to Norway, and seems to have left behind him as Jarl\* or Viceroy, one Outher or Octtar, a Norwegian. Becoming obnoxious to the Norwegian inhabitants of the southern district he was deposed by them, and Macmarus or Macmanis elected in his stead. The Northerns still adhering to Octtar, a civil war was originated. A battle fought at Stantway in Jurby† between the contending parties gave the victory to the Northerns after a severe struggle, in which the leaders on both sides were slain‡. In this juncture Magnus arrived a second time from Norway in 1098, found the island almost a desert, and the few inhabitants who remained living in caves and underground huts.

It is not improbable that Macmarus on his election to be Jarl may have made over some lands at Ballasalla and Rushen to religious purposes, and that these lands thus devoted to religion were granted afterwards by Magnus to the Abbot of Rievall, according to Camden, who further states that "they did not build there." Magnus, who was slain in an invasion of Ireland in 1103 at Moichaba, left four sons, the youngest of whom, Harold Gyllie, set up a claim to the throne of Man on the death of his father, which was rejected by the inhabitants, who gave in their allegiance to Lagman eldest son of Goddard Crovân. His tyrannical

\* Hence our English title "Earl."

† Or St. Patrick's Isle.

‡ Sacheverell says, "The women of the south side came with so much resolution to the assistance of their husbands, that they not only restored the battle, but as a reward of their virtue and bravery, to this day they enjoy half their husbands' estates during their widowhood, whereas the northern women have but a third."—Account, page 34.

acts, and especially his cruel treatment of his brother Harold, whom he barbarously mutilated, created such disaffection that he was obliged to fly the country, and it is stated that he went on a pilgrimage to the Holy Land and never returned. The Manks, finding themselves again without a leader and threatened with foreign enemies, determined to send for Olave Kleining (or the dwarf), the youngest son of Goddard Crovân, who had been brought up at the court of William Rufus and his successor Henry I., whose granddaughter Affrica he subsequently married.

Olave was quietly established on the throne of this isle, and appears to have ruled with mildness and equity. It was he who must be regarded in reality as the founder of the Abbey of Russin or Rushen. In the year 1134, according to the '*Chronicon Manniæ et Insularum*\*,' preserved in the British Museum, written by the monks of this abbey, he gave to "Ivo or Evan, Abbot of Furness, a portion of his lands in Mann, towards building an abbey in a place called Russin; he enriched the estate of the church with revenues and endowed it with great liberties."

The revenue he apportioned thus; one third of all the tithes to the bishop for his maintenance, the second to the abbey for education of youth and relief of the poor, and the third to the parochial priests for their subsistence. The Abbey of Rushen being a Cistercian cell dependent on the Abbey of Furness, received its abbots by appointment thence. The Abbey of Furness seems also for some time to have appointed to the bishopric of Man. Certain

\* MCXXXIV. "Fundata est Abbatia Stæ. Mariæ de Caldra. Eodem anno Olavus Rex dedit Yvoni Abbati de Furnes partem terræ suæ in Mannia ad Abbatiam constituendam in loco qvi vocatur Russin, deditque Ecclesiis insularum terras et libertates."—*Antiquitates Celto-Normanniæ*, page 13, printed at Copenhagen, 1786, from the original manuscript in the British Museum.

it is that Wimond, who was Bishop of Man from 1113 to 1151, was a monk of Furness Abbey, as was also Nicholas de Meaux, who was made bishop in 1203. The former there is reason to believe was of Manks descent.

There is great plainness and simplicity in the few relics of the architecture of this abbey which now remain to us; square-headed windows and doors as plain as those of the plainest cottage on the mountain side,—clear proof both of the ancient character of this religious house and of the limited extent of its revenues at any time. There is certainly no evidence here to bear out the statement which has been made by some, that in consequence of an accession of temporal dignity, the abbot and monks degenerated from their primitive simplicity and humble industry into pride and luxury. The property made over to their hands was in trust for others, and they seem to have exercised that trust honestly and rigidly. It was a noble testimony to their pious character and their poverty that the rapacious eighth Henry laid not his hand upon them till he had plundered all their English brethren. It was the latest monastery dissolved in these kingdoms; and like all other property perverted from ancient religious uses, it seems to have settled uneasily on its owner ever since, and has perpetually been changing hands. A regret has been expressed by many that it was not secured as the site for King William's College; it would thus have become again what Sacheverell states to have been the original intention in its foundation, "a nursery to the church." What has become of the endowments? "When (as the son of Bishop Ward says)\* the abbey was destroyed in that devouring reformation, its charitable possessions driven out into the world, its lands sold, its church the resting-place of kings and bishops desecrated, and itself buried in its own

\* Isle of Mann and Diocese of Sodor and Mann, p. 328.

ruins, the Lord of the Isle seized upon that third which had been held in trust by the monks *pro bono publico*." When Bishop Barrow came to the see in 1663, he found those vicars, the tithes of whose parishes were in the hands of the lord, in the greatest destitution; and devoting all his energies to raise them from this state, "he found means to purchase a long lease of those Impropropriations from the then Lord Charles Earl of Derby." An estate of the Earl in England, viz. the Manor of Bispham, together with the farm or tenement called Methop, was collaterally bound for the payment of the clergy. On the alienation of the island from the Derby family, the Duke of Athol claimed the impropropriations as an inseparable appendage of his estate and royalty, of which it could not be divested by any right that had or could be shown\*. The clergy were thus thrown upon the collateral security, viz. the estate of the Earl of Derby. The deeds for some time could not be found, and the clergy were under most painful apprehension, and would gladly have taken any reasonable consideration rather than lose all. At last, through the exertions of Bishop Wilson and his son, they were discovered in the Rolls Office, and the claim of the clergy was established. The compensation then agreed on to be paid out of the Derby estate was £219 per annum; but in 1809 Bishop Crican demanded a revisal, on the ground that the Earl of Derby had granted to Bishop Barrow all tenths yearly renewing, growing and increasing, and that the said tenths had greatly increased since 1735, when the former compensation was agreed on, and it was found that their real net annual value was £663. Lord Derby hereupon agreed to pay down the sum of £16,000 to be rid of the annual charge on his estate altogether, and very unwisely the sum was accepted, and spent in bad purchases of land returning

\* Life of Bishop Wilson by Crutwell, 8vo. vol. i. p. 177.

only about £400 per annum. Before the sale of his rights to the English Crown in 1765, under the Act called the Act of Revestment, the Duke of Athol had sold half of the impropriations to different parties; the other half is now in the hands of the British Government, and amounts to above £525\* per annum. It thus appears that of more than £1000 per annum, the present value of the third of the tithe belonging anciently to the Abbey of Rushen for the purposes of ecclesiastical education and relief of the poor, none is applied to its ancient use; it is alienated from the church; the £400 per annum applied to the augmentation of the salaries of the poorer clergy being, in reality, the proceeds of a certain claim upon an English nobleman's estate, obtained of his ancestors, with the moneys collected by the pious Bishop Barrow in 1666.

Humble in its architectural pretensions as this abbey is, it is the resting-place of the dust of mighty and pious dead. It is known that Reginald, Bishop of Man, who died in 1225, lies buried there†; Olave Godredson, king of the Isle in 1226, whose bastard brother the usurper Reginald‡, without any legal title himself, surrendered the Isle to the Pope Honorius in 1219, was interred there in 1237§; and so also was the Norwegian general Gospatrick in 1240||. Magnus¶, the last king of the Norwegian line,

\* The £525 per annum received out of the tithe by the British Government goes into the surplus revenue. The inhabitants claim that the surplus should be spent in the island upon improvements, and with seeming justice. Surely the church has an annual claim upon that surplus fund to the extent of £525 for the augmentation of the number of her clergy, their training, and the general purposes of church education.—See Appendix, Note E.

† Chronicon Manniæ, p. 44.

§ Ibid. p. 32.

‡ See Appendix, Note F.

|| Ibid. p. 34.

¶ Magnus III., son of Olave Godredson, was chosen king by

died in 1237, and was also interred in the Abbey of Rushen. In the abbey garden may now be seen an ancient tombstone, or stone coffin-lid. On its surface is a raised cross of beautiful device, by the side of whose shaft is a knight's sword. This is the famous so-called "Abbot stone of Rushen," upon which certain erudite dissertations have been written, and conjectures hazarded, such as that it was the tomb of some "sword-bishop," that is, a bishop exercising temporal and spiritual supreme authority. The floriated head of the cross, having been somewhat damaged, has been converted into a crosier by the imagination of the first writer on the subject; and subsequent authors have taken his statement upon credit, instead of examining for themselves. It appears to have belonged certainly to the tomb of a military person, but has nothing of the ecclesiastic indicated upon it. Its date is probably of the thirteenth century\*.

In passing from the abbey-grounds and following southward the course of the Silverburn, we soon find ourselves upon a line of disturbance running S. 40° W. magnetic, and the limestone upon the saddle being broken, permits the stream to pass onward in that direction, though there is a cross fault at right angles near Ballasalla House with the upcast on the south-western side, which seems to have acted in some measure as a barrier against the river, and perhaps at one period turned it down in the direction of Derbyhaven. It is at any rate very interesting to observe

universal consent of the people in 1252, confirmed in Norway in 1254, and by Henry III. of England in 1256. He assisted Richard, Bishop of the Isles, the next year, 1257, at the consecration of the Abbey Church of St. Mary of Rushen, which had been begun 130 years before. He was the ninth and last of the race of Goddard Crovân, and left no child.

\* We have given a view of this beautiful relic of the mediæval times.

the action of the stream on the loose materials of the boulder formation at an ancient period, and the formation of a species of basin to the northward of this fault, in which have been deposited montane alluvia. The river flows over the limestone for a considerable distance; properly speaking, this rock forms its bed all the way hence to Castletown and the sea, though in the lower grounds there may be intervening a foot or two of loam and alluvial gravel and boulders.

As we pass down the Silverburn, a few hundred yards below the flax-mill, we observe a good development of the boulder clay formation where it has been worn away by the river. The lower portion has a dirty bluish tinge, is very loamy, and abounds in scratched fragments of rock, chiefly limestone. A slight excavation would doubtless discover the surface of the subjacent limestone, which, as seen in the stream a hundred yards above, begins to rise here towards an anticlinal eastward of this point; and there is little doubt but that, as in other places in this area, wherever the boulder clay is removed, this surface would be found grooved and scratched with lines directed nearly towards the magnetic west. The upper portion consists chiefly of yellow sand, rather loamy, and with smaller fragments of rock included, which seem generally foreign to this immediate locality. The top of the bank consists altogether of fine sand, which I presume belongs to the platform of drift gravel and sand, whose elevation reaches in this neighbourhood just to this height, as seen in the fields on a level with the top of this bank. I am more inclined to the belief that this sand is a portion of the raised sea-beach of the drift than that it forms a bed in the boulder formation and passes under the rounded hill of the Creggins to the eastward. Yet the question has its difficulties. Formerly I included the rounded hills of

this neighbourhood in the drift-gravel series, presuming them to indicate its highest level, and to have been subsequently denuded and rounded during a period of elevation, or a rush of water from the north-east. Further study has led me to class them in the later period of the boulder formation, and to restrict the term "drift-gravel" series to the great platform of gravel rising gradually inland from the coast, indicative of a certain period of quiescence and more regular stratification in the marine deposits. The existence of such a platform is clearly made out if we descend the stream for about 300 yards till we come to a rustic wooden bridge, and then on the other side (the eastern side) take a seat upon the steps which carry the footpath alongside of the first gate which stops up the bridle-road hence to the Creggins. It is an enchanting station for the lover of scenery, and deeply interesting will it prove to the geologist\*. The steps on which we are sitting are fashioned out of the granite blocks which have been rolled down the Silverburn by means in part of that tributary branch of it which runs up to the granitic boss at St. Mark's, and carries off the drainage from that watershed. Some of them have, no doubt, tumbled out of the boulder formation in the uplands, at such a spot for instance as Greenaby, where the stream may be seen undermining banks from which are sticking out granite blocks which had been originally carried onwards from the great granitic boss by the drifting currents and diluvial waves of the boulder period along the south-eastern side of Barrule, and lodged in the various depressions on the mountain's side.

Let us look up the country. There, just over the stream and the gravel terrace beyond, peeps up the modest parish kirk, with its white-washed walls and ancient bell-

\* See "View of the Creggins Hill from the Silverburn."



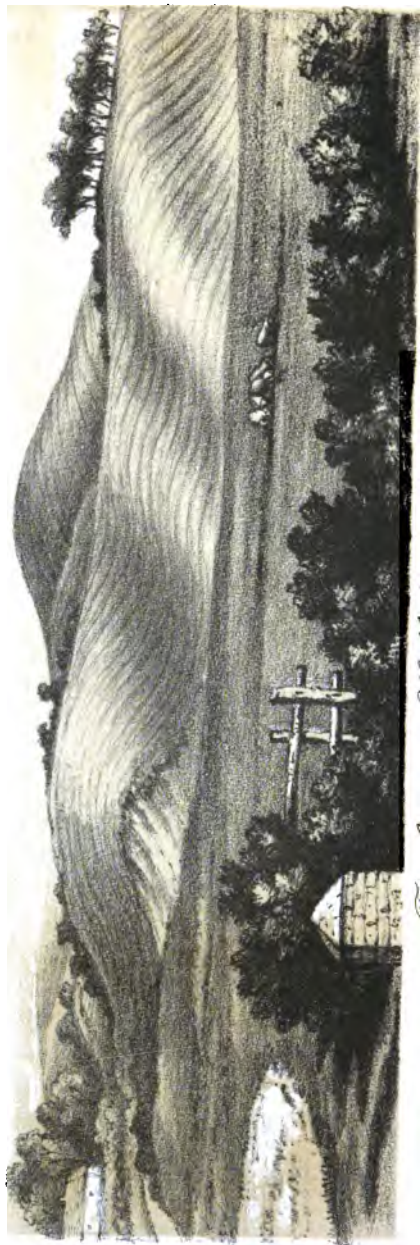
turret. A painted eastern window has recently been inserted, which casts a hallowed light within the church; and the antique granite font which for some time had outside of it been catching the rain-water gathered from its roof, has been restored to the inside of the building and occupies its proper place near the south door.

The name of the kirk and parish (Malew) is evidently a corruption of the name of the patron, St. Lupus, in honour of whom the kirk was dedicated. The interior walls of the church are largely occupied by monumental tablets, the oldest of which bears the date 1578.

To the westward of the kirk rises Skybright, a rounded hill of the boulder formation. On its top is perched a solitary erratic block of white quartz. Report says that once there was a circle there, and we may therefore regard it as the one last memorial of the earliest burying-ground existing at this place. There seems a melancholy pleasure in mingling our dust with that of our ancestors. It is another and a hallowed form of the spirit of patriotism which lingers in solemn reverence about the spot where our fathers worshipped when alive and are resting in death. Thus we find the kirk-yard of Malew, with its chiselled and dated grave-stones, in close contact with the more ancient circle on Skybright; and thus too we find the present church of St. Mary at Castletown near the site of the ancient temple of Jupiter Augustus\*.

Beyond Skybright we have Ballown resting in a wooded hollow, and thence a fine slope rises upwards towards Iry-na-Lhaa and South Barrule. Directly in front the clear stream comes purling down the valley through which we have just passed. Looking up it in the far distance is

\* In the grounds of Lorn House is a Roman altar, said to have been originally removed to Castle Rushen by Bishop Wilson, when he laid the foundation-stone of St. Mary's Chapel in 1698.



*The Greggins Hill from the Silverburn.*



Greebah, like in shape to a decapitated pyramid. Its nakedness is relieved by the denser foliage of the trees which cluster around the old abbey and the grounds of Ballasalla House; and there is a mistiness about it, partly arising from the distance and partly from the smoke of the village of Ballasalla, which lies hid down in the hollow. The flax-mill forms a picturesque object in the nearer landscape, and we just hear its monotonous sound floating down to us upon the streamlet and the breeze. The discharged water from the wheel, as it rushes from the conduit into the Silverburn below, raises many a bright bursting bubble to the surface, and attracts around its embouchure a shoal of sportive trout. A hawthorn hedge at one point borders the stream; and the opposite bank is fresh with mosses and blooms with furze, not altogether, as Goldsmith says, unprofitably gay, for the cattle browse upon the tender shoots, and in some seasons of the year the branches are bruised by the mountain farmers and mixed with the other provender. And here close at hand is the study for the geologist\*.

The Creggins Hill in front is of an oblate hemispherical shape, and rises to the height of 130 feet above the high-water sea-level. To the north of it is a lower hill of similar shape and character, and the major axis (so to speak) of each of them runs nearly magnetic east and west, in a direction towards which all the currents in this neighbourhood tend. A flat terrace of gravel fringes round the base of these hills at a height of twenty-six feet above high-water mark. Yonder group of trees to the eastward, hard by the high road and the Creggins farm-house, have fixed their roots deep into and luxuriated upon this pebbly platform. But the steps on which we are seated are on

\* See "View of Creggins Hill from the Silverburn," and Plate VI. section 1.

the level of a still lower platform of fine alluvial sandy loam, upon which the river in its meanderings has made great inroads, and deposited in its stead a considerable quantity of montane detritus, boulders, gravel and sand. In the corner of the field on our right, on the opposite side of the road from the cottage, is a patch of turfy ground, from underneath which, in a whitish marl, have been turned up some remains of *Cervus megaceros*. The drift-gravel directly before us is worn into cavities, presenting all the appearance of a low sea cliff exposed to the action of breakers. Its height above the stream, which at one point is wearing it away, is sixteen feet. If we were to follow the stream downwards towards Castletown Harbour, we might find, in the harbour itself below the level of high-water, trunks of trees, chiefly hazel, which seem to have grown on the spot, with *leaves* and *nuts*; and this, as we shall see hereafter, is not the only locality in this southern area where we meet with partially submerged forests.

The explanation of these phenomena, the physical history of the country to be read from these hieroglyphics, seems to be this. The rounded hills of the newer boulder formation, presenting all the characteristics of those which the Swedish naturalists have described under the term *osar* and *trainées*, having been partially raised above the sea-level suffered considerable denudation, and contributed largely towards the materials of the drift-gravel platform, which was then the sea-bottom. This sea-bottom was afterwards raised, whether by slow degrees or suddenly we have hardly at present sufficient evidence to determine, though it is not altogether improbable that it took place at intervals during which the drift-gravel platform was greatly eroded and several depressions in it scooped out, in which freshwater lakes afterwards existed. This elevated drift platform connected the island with the sur-

rounding countries, and was the means of the immigration into it of various tribes of animals and the introduction of several new species of plants.

Afterwards forest-trees sprang up, and a rich vegetation clothed the surface. Another depression took place, and the sea regained in part its former area and overthrew and buried the forests.

There has subsequently been a *partial re-emergence*.

I am more inclined to this view of the position of the half-submerged forests than to that which would attribute it to a *submergence* going forward at the present period.

## CHAPTER VI.

The ancient Castle of Rushen—The ramparts, the moat, the glacis, the keep.—Well in the drift-gravel.—The Derby family.—Bishop Wilson.—View from the castle walls.—The town.—The old chapel and clock-room.—Legend of the Black Lady.—Hango Hill.—Limestone blocks in the boulder clay.—William Dhone.—Skeletons.—King William's College.—Ancient foundation.—Advice of the Earl of Derby to his son.—Bishop Barrow.—The Isle of Man an ancient seat of learning.

THE ancient Castle of Rushen\* occupies a commanding position on the southern side of the Silverburn, where it meets the salt-water on the western margin of Castletown Bay. The best near view of it is perhaps from the stone bridge at the northern extremity of the harbour. Its resemblance to the Danish Castle of Elsinore has before been noted; and of its great antiquity there is no doubt, even should the date† fixed upon for its commencement be incorrect.

There is a solemn majesty about it, and a solidity in its masonry which betokens great strength. In the centre is the keep, whose ground-plan is an irregular rhombus, the longer sides running nearly north and south. It is flanked with towers on each side; the eastern, southern, and western standing out from it of a square form; the northern rising upon the building itself. At its northern extremity is a lofty portcullis, passing which is an open

\* St. Russin, after whom the Castle, the Abbey, and the Sheading have taken their name, was one of the twelve missionary fathers who along with Columba settled in Iona, A.D. 563.

† A.D. 947. See page 34 *supra*.

quadrangular court, with a well in the centre. The height of this keep at its entrance is seventy-four feet, and on the right-hand side of it at entering, a winding stone staircase leads us by ninety-nine steps to the summit of the northern or flag-tower, the total height of which from the ground is eighty feet. The southern tower rises seventy feet, and contains the clock which was presented by Queen Elizabeth in 1597, when she was holding the island in trust, whilst the rival claims between the heirs of Ferdinand and William were being litigated\*. The east tower is seventy feet, and the west the same, if we allow one foot for the rise in the ground.

The thickness of the walls of the keep varies from seven to twelve feet. On the outside of it, at a short distance, is an embattled wall, in height twenty-five feet, and nine feet thick, with seven square towers at irregular intervals. Exterior to this wall was a fosse or moat, now filled up. On the exterior of this moat is a glacis, erected, it is said, by Cardinal Wolsey, when he was guardian to Edward, the sixth Lord of Man. At three several points in this glacis were formerly three low round towers or redoubts, now in ruins. The best specimen of them is seen on the north-western side, near the harbour.

If the ditch were filled from the river, it is plain that there must have been some elevation of the land since its formation; at the present time the highest tides seem hardly capable of surrounding the castle with water to any depth. But it is stated that a few years since some wooden pipes were discovered conducting water to the castle from a reservoir in the higher ground.

At the mouth of the harbour, and in its bed, the limestone is seen to rise from the bay on a saddle, whose axis

\* Rolt's Isle of Man, page 42, edition 1773.



runs S. 70° W. magnetic, and then to dip again inland\*. The boulder clay and the drift-gravel have filled up the depression on the western side of this saddle, and the castle and town stand on the fine platform of gravel which we have before had occasion to notice. The wells of the castle and the town are sunk through the gravel generally to the clay. When carried too deep, they are sometimes rather brackish, in consequence of the sea-water, which finds access through the harbour at high water, the dip of the limestone inland preventing its easy return to the sea.

Let us re-enter the castle.

There is a winding road conducted between lofty ramparts from the ditch, where formerly was the drawbridge, to the castle-gate and the first portcullis†.

To the left-hand a flight of stone steps leads to the Rolls' Office‡; and on passing through the portcullis into the open space between the two keeps, we observe on the right-hand another flight of steps leading to the ramparts, and conducting also to the Court House and the Council Chamber. These buildings were formerly occupied by the Derby family, and by the governors and lieutenant-governors of the Isle to the time of the late Lieutenant-Governor-General, John Ready, who resided there between two and three years§. A stone was lately thence removed in making some repairs, on which are inscribed the letters

\* Between the old and new pier is a trap-dyke, which seems to have greatly altered the limestone with which it is in contact. See Plates II. and III.

† Anciently at the castle-gate were placed three stone sedilia, one for the governor, and the other two for the deemsters. In the year 1430, Henry Byron, the lieutenant-governor, held a court of all the Commons between the gates on the Tuesday next after the 20th day of Christmas.

‡ In which the public archives are kept.

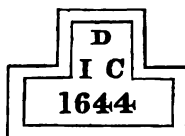
§ Lorn House, to the northward of Castletown, has latterly been

D. I. C.\*, with the date 1644. I read them James and Charlotte Derby, who it is known resided here at that date, when they saw the commencement of the great rebellion, in which the former, like the blessed king whom he served, lost his head under the hands of cruel and unreasonable men†.

As we enter the inner keep we have here too the memorial of another holy man, who preferred a clear conscience and Christian consistency to wretched expediency and a time-serving surrender of a righteous cause. In this little dark cell, on the left-hand, was confined the apostolic Thomas Wilson, who, ere he died, was one of the two oldest, poorest, and most pious prelates in Christendom‡. He had suspended Archdeacon Horrobin, the governor's chaplain, for a serious breach of ecclesiastical discipline. Governor Horne in his rage and fury sent a band of soldiers to Bishop's Court, who conveyed the good man to Castle Rushen, where he was immured for two months. On the opposite side of the entrance, at the foot of the

the Lieutenant-Governor's residence : it is the property of the Cunningham family.

\* Thus :—



† For an account of James, seventh Earl of Derby, see Appendix, Note G.

‡ "Cardinal Fleury wanted much to see him, and sent over on purpose to inquire after his health, his age, and the date of his consecration, as they were the two oldest bishops, and he believed the poorest in Europe; at the same time inviting him to France. The bishop sent the cardinal an answer which gave him so high an opinion of him that he obtained an order that no French privateer should ravage the Isle of Man."—Crutwell's *Life of Bishop Wilson*, 8vo edition, vol. i. page 226.

flag-tower stairs, is another cell, in which were confined at the same time the bishop's two vicars-general.

Let us now ascend by the spiral staircase to the summit of the tower, observing first on the headstone of the doorway\* of the cell at its foot the date 1103; here seventy-two steps bring us to the room at present used for the chapel, thence eighteen steps lead us on to the roof, and nine more to the upper platform of the flag-tower. Now let us look around.

In the far south-west lies the Calf of Man, with the rocks called the Borrough and the Eye,—the former projecting from the island, the other isolated, and both drilled through by the action of the sea at a higher relative level†. Spanish Head rears its awful front towards Port St. Mary Bay, and the rocks in its neighbourhood are rent by a landslip into chasms 300 feet deep. The fine gravel platform on which Castle Rushen is built seems, as regarded from this point, to extend almost unbroken to Port St. Mary and Port Erin, the intersecting rivers not being distinguished; and the geologist will mark well the clear straight line which the drift platform presents against the western horizon, as contrasted with the broken and irregular outline of Brada Head and the Mull Hills, which tower upwards on either side to the height of 600 feet.

Directly over Port Erin, in the gap between the headlands just named, on a clear day, we can mark far away over the Irish Sea the magnificent granitic mountains of Mourne, Slieve Donard, and Slieve Bingian.

Directing the telescope to the south, we may on a tolerably clear day discern the Paris Mountain in Anglesea,

\* The style of this and most of the other doorways is the square-headed trefoil arch, which prevailed in England in the twelfth century.

† See Plate VII., section 6.

and still more to the eastward the Snowdownian range, with Carnedd-Llewellyn and Penmaenmawr. A great gap in the horizontal traverse then occurs—*nihil nisi pontus et aer*—till we reach at a north-eastern point Black Coombe in Cumberland, and the mountains beyond it round about Skawfell and Langdale Pikes. The more northern giants of Cumberland are intercepted by the nearer though very inferior elevations of this island, beginning with Santon Head and Douglas Head; whilst the "Land o' Cakes" is shut out altogether by Mona's Monarch and supporters; and of these the view from the castle-tower is highly interesting and imposing, from the manner in which they are grouped together.

And then trace out the nearer landscape, the deep indentations of Poolvash Bay, Castletown Bay, and Derbyhaven, crowded as they are in the summer months with the herring-fleet of from three to four hundred sail. And how beautiful the upland slope towards the dark heather-clad South Barrule, and the granitic boss above St. Mark's, whence the silver river comes flowing down, and meandering in the alluvial valley before us, till it mixes with the sea-water in the harbour at our feet!

We have also still nearer a bird's-eye view of the town itself, the spacious market-place and parade, with its Doric freestone column, an honorary memorial of the excellent Governor Smelt\*. There to the right is the market-house, and opposite to it the barracks; and hark! that is the trumpet-call to parade. St. Mary's Church† occupies

\* Erected in 1836.

† In clearing away the foundation of the ancient cross which stood in the market-place, when the new portico of St. Mary's Chapel was erected in 1826, three Roman coins of Germanicus and Agricola were discovered. The first erection of St. Mary's Chapel was by Bishop Wilson in 1698. See Crutwell's *Life of Bishop Wilson*, vol. i. page 41, 8vo edition.

the south-eastern extremity of the market-place, and a little to the north of it is situated the Free School\*, which was the more ancient church of St. Mary of Rushen, and has still about it more of the true character of church architecture than the modern erection.

That square building in the open space to the east of the Castle is the House of Keys, the place of meeting of the Insular Parliament, consisting of twenty-four members, or Taxiaxi†, whose original institution dates back to the reign of Gorree or Orry, in the tenth century. And we must not overlook the old and new piers at the entrance

\* Of which the bishop and archdeacon are trustees : free-boys 10 ; master's salary 60*l.* per annum.—Isle of Man Charities, p. 23.

† Mr. Feltham states (page 139 of his *Tour through the Isle of Man*), on the authority of Mr. C. Vallancey, that “in the Gaedhlic *taisce* means a pledge or mortgage, and *aisce* a trespass;” and he infers that these Taxiaxi were originally hostages to the Lord of the Isle for their different clans. In the statute-book there is a document (drawn up in 1422, when the great meeting of the Commons was held at Reneurling in Kirk Michael) which states “that there were never twenty-four Keys in certainty since they were first called Taxiaxi : these were twenty-four freeholders, to wit, eight in the out isles and sixteen in your land of Man, and that was in King Orry's days. And since they have not been in certainty, but if a strange point will come which the Lieutenant will have reserved to the Tynwald twice in the year ; and by the leave of the Lieutenant the deemsters there to call of the best to his Council in that point as he thinks fit to give judgment ; and without the Lord's will none of the twenty-four Keys to be.” At the Court held at Castle Rushen in 1430 by Henry Byron, as before stated, six men out of every Sheading being chosen by the people and presented to him, he selected four out of each six and so made up the number twenty-four. At the present time, when one member dies or is discharged, the rest present two persons to the Governor, from whom he chooses one to fill up the vacancy. The name Keys is perhaps derived from the Manks “Keesh,” a tax. Till 1706 the Keys met in a room in the Castle. The present building was occupied by them in 1818.

to the harbour, altogether of insular materials and workmanship, and the guard-house just in front of the castle gates, with its lounging inmates and sentinel pacing to and fro.

But we have not quite done with the castle itself,—we must visit the clock-tower, where the antiquarian will find objects for his study.

We may have observed that the windows looking in upon the central open square of the keep have relics of tracery worked in freestone, and evidently inserted at a date later than the building of the castle. In looking at the castle from the outside (say from the drawbridge over the river), we observe one of these more ornamented windows on the eastern side of the clock-tower. I had long a suspicion that this might have been the eastern window of the old chapel, and an examination of the interior of it converted the suspicion into a certainty.

On each side of the oriel window is a stone ledge on which rested the ancient altar, on the southern side of it a piscina, and on the north a small niche or cupboard (an equivalent of the credence table) for containing the sacred elements. In the northern angle of the little chapel, which is hardly fifteen feet square, is a small grated window communicating apparently with a cell, which has been since thrown into a passage; we may readily conjecture this to have been the Confessional. Here at any rate was the old chapel of the castle garrison, and we may feel thankful that it has been converted to no other use than that of containing the more recent though still venerable clock, which is itself not without interest. It was a present from Queen Elizabeth (as we have before noticed), and an improvement on the antique sundial upon the market-cross below; and the bell, upon which the hours are tolled, was by its inscription the gift of James, tenth Earl of the noble house

of Derby, the last connected with the Isle of Man, in the year 1729, six years before his death.

How long this ancient chapel may be occupied by this solemn monitor of the lapse of time 't is hard to tell. An unsightly addition to the castle within the last two years has blocked up the clock-face, and public convenience may perhaps demand the removal of the machine to a more conspicuous locality. *O tempora! O mores!* We still have to go to school to the architects of the decried dark ages.

There are strange tales afloat respecting this castle and its inmates in days of yore. Tradition connects the castle with the Abbey of Rushen by means of a subterranean passage\*, which the lover of romance at one time has rendered subservient to the rescue of a captive maiden by her affianced knight, at another has described as a kind of *facilis descensus Averni*, the dark road to the Home of the spell-bound Giants. There is little need of *fiction* to give interest to a building whose *realities* are all romantic, and must move to sadness the heart that can feel for others' woes; but Waldron's account of the Black Lady of Castle Rushen is given with such a zest for the marvellous, that it may perhaps relieve the tedium of what some will deem a dry matter-of-fact description of this relic of feudal pomp and power†.

"A mighty bustle they also make of an apparition which, they say, haunts Castle Rushen in the form of a woman, who was some years ago executed for the murder of her child. I have heard not only the debtors, but the

\* The fact of dark cells built in the solid foundations of the towers and strongly arched over was established in certain repairs of the building made in 1816.

† Waldron's *Description of the Isle of Man*, folio edition, 1731, page 136.

soldiers of the garrison, affirm that they have seen it at various times; but what I took most notice of was the report of a gentleman, of whose good understanding as well as veracity I have a very high opinion. He told me, that happening to be abroad late one night, and caught in an excessive storm of wind and rain, he saw a woman stand before the castle gate; and as the place afforded not the smallest shelter, the circumstance surprized him, and he wondered that any one, particularly a female, should not rather run to some little porch or shed, of which there are several in Castletown, than choose to stand still, alone and exposed to such a dreadful tempest. His curiosity exciting him to draw nearer that he might discover who it was that seemed so little to regard the fury of the elements, he perceived she retreated on his approach, and at last, he thought, went into the castle though the gates were shut. This obliging him to think that he had seen a spirit, sent him home very much terrified: but the next day relating his adventure to some people who lived in the castle, and describing as near as he could the garb and stature of the apparition, they told him it was that of the woman above-mentioned, who had frequently been observed by the soldiers on guard to pass in and out of the gates, as well as to walk through the rooms, though there were no visible means to enter. Though so familiar to the eye, no person has yet had the courage to speak to it; and as they say that a spirit has no power to reveal its mind unless conjured to do so in a proper manner, the reason of its being permitted to wander is unknown."

On leaving Castle Rushen, and the heroes both of romance and reality who make a figure on the page of its history, are two objects in the immediate neighbourhood closely associated with one of them, and serving to keep up our interest in the character of the great and unfortu-



nate James Stanley, seventh Earl of Derby, and his most truly heroic Countess,—these are Mount Strange and King William's College.

At the head of Castletown Bay is a singular and characteristic patch of the boulder clay formation. It seems to have been originally one of those low, rounded, ellipsoidal hills of that formation, which we have had occasion already to notice in the neighbourhood of the Creggins, but of a still more diminutive character, hardly rising twenty-four feet above the present high-water level. The continued action of the sea, the rain and the wind, has in the lapse of time reduced this mound to at most only half its original size, and now it presents a low cliff to the south-westward, affording an excellent insight into its structure.

Let us imagine an inland lake, which in the extremity of a most severe winter has been frozen to a great thickness, bursting from the accession of waters on a sudden thaw; or rather let us call to mind the magnificent spectacle of the débâcle of the Val de Bagnes\* in the autumn of 1818, brought about by the extension of the Glacier de Getroz, and the consequent stoppage of the Dranse in the previous winter. The melting of the icy barrier, aided by the reflex action of the overpouring cascade, let loose in half an hour 500 million of cubic feet of water, to roar and rage and roll onwards through a narrow and tortuous gorge with unspeakable velocity and with awful grandeur; and thus ultimately a vast torrent of water, mud, gravel, boulders and blocks of ice poured forth upon the devoted district of Martigny, sweeping down in its passage trees, bridges, barns, cottages, and even large buildings.

Arrest such a torrent in its course, and, fixing it upon

\* For an account of this débâcle see Lyell's *Geology*, vol. i., or *Edinburgh Phil. Journal*, vol. i.

the spot, permit the waters quietly to drain off, and you have in character just such an accumulation as that presented at the head of Castletown Bay, only substituting in the latter place angular and scratched blocks of limestone for the angular and scratched blocks of ice.

We have a consolidated mass of black or dirty blue mud, such as we can easily imagine to be formed by the grinding down of the dark limestones and shales of this district, such a debris in fact as is formed in the yards of the stone-masons of this neighbourhood where this same limestone is cut and polished. In it we find mixed up confusedly gravel and sand, and pebbles (not large) of foreign rocks, granites, syenites and porphyries, fragments of the coal-measures of Cumberland, and one or two chalk flints\*. We have some boulders of the insular granite and larger masses of insular rock, such as greenstone and old red conglomerate, but above all masses of limestone in rhomboidal blocks, some weighing upwards of a ton and having the appearance of transport from Coshnahawin, a mile and a half to the north-eastward, where we find the limestone beds on the sea-shore cracked and broken up into similar masses by the intrusion and subsequent cooling down of trap. These limestone blocks seem pushed over one upon the other, and piled up amongst the gravel, sand and clay in wondrous confusion.

Here is the study for the geologist; and he might, perhaps, imagine that one of the names of the spot, Mount Strange†, has something to do with the extraordinary

\* The nearest locality of the chalk is in the north of Ireland. It is just possible that the examples of chalk-flint which I have found in the boulder clay of Hango Hill may have tumbled down out of the overlying drift-gravel.

† It is generally known by the name Hango Hill, from its having been formerly used as a place of execution.

history of its physical composition ; but it is not so. The name is taken from one of the titles of the Derby family, and the locality is famous for an event which has been considered by some as casting a shade over the memory of that illustrious lady, whose defence of Lathom House\*, and uncompromising fidelity to her sovereign and her liege lord, showed her worthy of being the wife of the great and good James, the seventh Earl of that noble family.

In the parish register of Kirk Malew is the following notice :—" Mr. William Christian of Ronaldsway, late Receiver, was shot to death at Hango Hill, 2nd January, 1662. He died most penitently and most courageously, made a good end, prayed earnestly, and next day was buried in the chancel of Kirk Malew."

The crime for which he suffered was alleged treason against the Countess of Derby, in that he had in the year 1651 headed an insurrection against her, and, taking the sovereign power into his own hands, had thereby deprived her and her heirs of their vested rights. He made no attempt in court to defend himself against the charge, alleging his Majesty Charles the Second's general pardon and indemnity as a sufficient bar against all legal proceedings. This plea was overruled by a majority of the court, as not availing in case of treason against a member of the reigning family ; and he was sentenced forthwith to be " shot to death, that thereupon his life may depart from his body†."

\* See Peck's *Desiderata Curiosa*, vol. ii. p. 449.

† Sir Walter Scott in his '*Peveril of the Peak*,' has erroneously stated that his execution took place in the court-yard of Peel Castle. He has perhaps confounded this William Christian with Edward Christian, who died in Peel Castle in 1670, having been committed by the Earl of Derby in 1643, on his attempting a disturbance. He had been governor in 1628.

The memory of William Dhone is held sacred by Manxmen, and he has been regarded by them as a martyr to the cause of popular liberty. It is difficult at this distance of time, when the whole tone and character of society has so entirely changed, to pass a correct judgement upon acts which, if attempted now, would doubtless be reprobated as excessively harsh and unjustifiable.

That was not a period when those who had power felt themselves amenable to the judgement of their fellow-men as to the manner in which they should use it. The royalists had suffered too great injustice at the hands of the Roundheads in the period of the great rebellion, to be over scrupulous of the exact limits of justice towards the weaker party when the power was restored into their hands. They would doubtless endeavour to excuse any excess on the severer side, by the argument that "those should have judgement without mercy who had showed no mercy."

The husband of the noble Countess had, in defiance of all the laws of war, been condemned by a court-martial to lose his head, after quarter for life had absolutely been granted to him on his surrender; and he was put to death under aggravated circumstances of insult. William Christian was a *protégé* of the Earl, who reposed in him so much confidence as to leave him with the command of the insular troops, and as the protector of his wife and children. He enters into a conspiracy "to withstand the Lady of Derby in her designs;" and within eight days after the murder of her husband, at the head of a popular insurrection, forces the widowed and sorrowing Countess to consent to their demands.

It has been further stated, and never clearly disproved, that on the first appearance of the parliamentary troops under Colonel Duckenfield off the island, William Christian at dead of night seized on the Countess and her family in

Castle Rushen, and conveyed them as prisoners to the invading army. Into the true character of this man we may perhaps gain some further insight, from the circumstance that when James Chalonier was appointed commissioner by Lord Fairfax, he found it necessary to sequester the estate of the Receiver-General, to make compensation for the unaccounted for arrears of the exchequer, and imprisoned his brother John for assisting him in escaping off the island.

With a knowledge of these facts, let us place ourselves in the position of the Derby family at the period of the Restoration, and we shall perhaps own the temptation very great to hasten the downfall and death of such a character.

Since that event *time and tide* have done their work of devastation upon this spot. That old gray battlemented ruin crowning the mount was then standing in the midst of a circular area, and there was a drive all round it, and the cliff was removed some thirty or forty yards from the building. Already has one side of the large rectangular room which it contained become a prey to the waves, and the remainder totters on the brink of a precipice, which each equinoctial spring-tide bids fair wholly to pull down.

“ No more the glance  
Of blazing taper thro’ its windows beams  
And quivers o’er the undulating wave ;  
But naked stand the melancholy walls,  
Lash’d by the wintry tempests cold and bleak,  
Which piece-meal crumble down the whole to dust.”

The ground was anciently used as a place of sepulture, and as the cliff tumbles down, the graves are exposed to view, and the skeletons one after another become the sport of the rolling surge. It has been presumed that these are the mortal remains of criminals who have been executed on the spot. If so, they must have suffered at a period

anterior to the erection of the building now in ruins, for the destruction of the last winter has discovered skeletons directly under the very foundation of it\*. I am somewhat inclined to the belief that we have here one of the many ancient tumuli which are scattered about the island; and that the use of the spot as a place of execution, and its consequent nomenclature, is of a more recent date.

But we have not yet entirely bid farewell to him with whom it has been well said, "the sun of the house of Stanley set in clouds and darkness."

There is good reason for tracing up the origin of King William's College to the great Earl of Derby who perished at Bolton. In that letter of advice† to his son Charles, which he wrote in 1643, during his sojourn at Castle Rushen, we meet with these two clauses: "Fear God, honour the King. Have this in your thoughts, first to choose a reverend and holy man to your bishop;" and "I had a design, and God may enable me to set up an university without much charge (as I have conceived it), which may much oblige the nations round about us. It may get friends unto the country and enrich this land. This certainly would please God and man." The troublous times in which he lived and died, prevented him from carrying out these pious designs. His son, when restored to his own, remembered one part of that advice, which has led, after the lapse of nearly two centuries, to an attempt at carrying out the wish of the father as above expressed. In 1661, good Mr. Rutter, who had been arch-deacon for many years, was appointed to the bishopric, a

\* In addition to the case of William Christian before mentioned, there is another memorandum in the parish register, stating that in the year 1654 Kewish and Callow of Kirk Maughold, who were executed at Hango Hill, were buried in Kirk Malew.

† See Peck's *Desiderata Curiosa*, vol. ii. p. 429.

man for whom (said the Earl to his son) you and I may both thank God. He was removed by death\* in two years, and in his place was appointed Dr. Isaac Barrow† (afterwards translated to St. Asaph), who at the same time was made governor of the Isle. And in this joint office as sword-bishop, or governor both in civil and ecclesiastical state, he conferred in the short period of his stay most important and lasting benefits upon this church and people.

It has before been noticed‡, that at the period of the Reformation the abbey third of the insular tithe fell into the hands of the Lord of the Isle, and that Bishop Barrow managed to purchase a long lease of those impropriations from Charles, the eighth Earl of Derby, and with these impropriations he increased the salaries of the poorer clergy. After the purchase a small sum remained in his hands, which was afterwards increased to £600, which he directed should be applied towards furnishing a master for his proposed academic institution. He also by will granted the sum of £20 per annum, due and arising out of the profits of the estate of Ballagilley and Hango Hill, towards the

\* The following singular epitaph, written by himself, was placed on the tomb of Bishop Rutter in Peel Cathedral, inscribed on a brass-plate. The plate was removed from the tomb about fifty years ago, and was supposed to be lost or destroyed, but was discovered in 1844 at the bottom of a well near the sally-port of Peel Castle.

In hac domo quam a vermiculis

Accepi confratribus meis spe

Resurrectionis ad vitam

Jaceo Sam permissione divina

Episcopus hujus insulæ.

Siste, Lector } = { Vide ac ride

Palatium Episcopi.

Obiit XXX<sup>o</sup> die mensis Maii 1663.

† Fellow of Eton, and uncle to the famous Dr. Isaac Barrow, Master of Trinity College, Cambridge.

‡ Page 49, *supra*.

maintenance of three boys at this academic school when it should be settled; or in case there should be no such school within twelve months after his decease, then towards the maintenance of two youths at some university abroad\*. In the year 1728, the trustees of Bishop Barrow's fund came into full possession of the above estates; and after the year 1808, the Academic Masters' fund and the Academic Students' fund were merged into one trust.

The accumulations from this trust, aided by public subscriptions and a mortgage on the Ballagilley and Hango Hill estates, enabled the trustees to commence the erection of the present college, which was first opened for the reception of students on the 1st of August, 1833, and named in memory of his Majesty King William IV.

Writing in the year 1829, Lord Teignmouth says, "Bishop Ward does not despair of executing another project—the foundation of a college for the education of the Manx clergy. The success which has rewarded a similar plan of the Bishop of St. David's, affords him much encouragement; and it is hoped that such a place of education might, from its vicinity, and from the great cheapness of living, attract students from Ireland and the adjacent parts of England, who could not otherwise afford the expenses of a residence at College; and that Mona may become once more, as in ancient times, the fountain of honest learning and erudition†."

\* At the present, three youths at Cambridge are holding exhibitions from this estate of thirty pounds a-year each.

† "Hector Boetius says that Man was the fountain of all honest learning and erudition. Others of the Scotch nation held it to be the Mansion of the Muses, and the Royal Academy for educating the heirs apparent of the crown of Scotland, as Eugenius the Third himself, who likewise sent three of his sons into the Isle of Man to be educated under Conanus, whom they write Bishop of Sodor, two of which, Ferquard and Donald, were successively kings of



And in a note written in 1836, he adds, "It affords me much gratification to state the successful result of the zealous efforts of Bishop Ward, and other trustees of Bishop Barrow's fund, to establish a college for the objects above specified. That worthy Prelate's pious intentions have been thus fulfilled, after an interval of nearly two centuries."

May we not believe that Bishop Barrow had before him the suggestions of the illustrious Earl of Derby in his famous letter to his son, and that to such suggestions King William's College is somewhat indebted for its present existence?\*

Scotland, as both Hector Boetius and Hellinshead witness. So celebrated was the discipline of those ages, that it seems to have passed into a law that the princes of Scotland should be educated in this island."—Sacheverell's *Account of the Isle of Man*, the Introduction, p. 5.

\* For a further account of King William's College see note H, Appendix.

## CHAPTER VII.

Castletown Bay.—The Scraans.—The race-course.—Sir Isaac Newton.—Measures of time and space.—The measure of a man.—The former extent of the drift-gravel.—Time occupied in its erosion and in the formation of the Irish Sea.—Consideration of time arising from the composition of a gravel bed.—The circuit of Langness.—Trap-dykes, Bosses, Natural arches.—Round tower.—Porphyry.—St. Michael's Isle.—Ruined oratory.—The old fort.

ON the eastern side of Hango Hill is a grassy recess opening to the south, and affording a pleasing view of Castletown and its extensive horse-shoe bay. The town is well relieved against the dark mass of the Mull Hills which rise over the bold cliffs of Spanish Head; St. Mary's Chapel, the Castle and the five-sailed windmill standing prominently forth with the two quays and the shipping in front, and the whole picture falls again upon the eye reversed in the watery mirror at our feet.

A series of marine residences occupy the shore to the south of the town terminating with Scarlet House, thence the coast-line sweeps gently south-eastward; and where the limestone rises on a series of undulations against the outburst of igneous rock, forming at its extremity the basaltic pile called the Stack of Scarlet, a group of limekilns, with their front seaward, may easily be mistaken for a battery guarding the entrance to the bay.

The opposite horn of the bay is formed by the southern point of the peninsula of Langness, or as it is written in the old map of the island before alluded to, "the poynt Langnouse." It is a mass of clay-schist tilted and contorted between two hard greenstone dykes, which here run

out into the sea S. 70° W. magnetic, nearly in a line with the Eye of the Calf, and form the Scraans, an awkward reef on which the tide sets with great force from the Calf of Man. In the hollow of Langness, leaning up against the schist, and just at the angle bending over it in a saddle, is the Old Red conglomerate and sandstone which forms the entire eastern coast-line of the bay till we reach the isthmus of Derbyhaven. The isthmus itself is formed by a long bank of gravel and sand, which I believe to belong to the drift period, though it has the general character of the sand dunes which are found on coasts liable to periodic winds\*.

This bank extends all along the head of the bay to Hango Hill, and is clothed with a short and sweet herbage and crowded with wild flowers. The purple thyme creeps along upon the ground, mixing with the yellow flowers of trefoil and galium, and the vernal squill with its pale blue petals rears its graceful head in spite of the stormy south-westerners that sweep across the bay; the sea-holly (*Eryngium maritimum*) has sent down its long taper roots into the sand, and flourishes even amongst the shingle which has been driven by the tides high and dry on the shore. As the bank dries up almost immediately after a shower, and commands very beautiful views, it is a favourite promenade of the neighbourhood, and is known familiarly by the name of the Race, from the circumstance of its having been used as a race-ground some few years ago. The fishermen spread forth their nets here on the Saturday's eve at the close of the herring season, when the shoal has come down to the bays in the south of the island, and the little children amuse themselves afterwards in picking up the bits of coarse coral and the star-fish and sea-

\* A cutting made for a drain last summer shows alternating layers of pebbles, sand and loam.

urchins which have been entangled in them and dragged ashore.

The saying of the great and yet humble-minded Newton, towards the close of that bright career of physical discovery which has placed his name high upon the list of those illustrious philosophers of whom Great Britain justly boasts, will often occur to us in our sea-side rambles: "I seem to myself but as a child who has been permitted to gather a few bright pebbles on the shore, whilst the vast ocean of eternal truth has lain before me wholly unexplored."

The works and the monuments of man we may easily measure by our own finite standards of time and space, by days, months and years, by inches, feet and miles; but our scales are all too large or too small when we attempt to apply them to the measurement of the works of Him from whom the Monad and the Archangel are alike infinitely removed, and to whom they are still alike most intimately known; of Him "who inhabiteth eternity, and is the same yesterday, to-day and for ever."

What an astounding idea of time is presented by the scene which we are now contemplating! The age of the ruin on the cliff above us we may talk about, the years also of the venerable Castle, which still rears its head unscathed over the western margin of the bay, are all numbered: these are the works of man, and come within the measure of a man. But what *dare* we say of the age of that bed of gravel which runs like a fringe all round the bay, capping all the rocks which are twenty feet above high water mark? Let us pass over this raised sea-beach on which we are sitting, which is not more than eight or ten feet above the present high water sea level; for since it contains shells not apparently differing at all from those now inhabiting the neighbouring sea, it may be considered

*geologically* recent, though the very gradual rise by which it seems to have been laid dry, *may* have been going on long antecedent to the period which we call historical.

It is very readily seen how this drift-gravel bed was at one time at the bottom of the sea, and that it was spread out pretty evenly on all sides, filling up every depression, and thus of course filling up the bay of Castletown; so that on the elevation of the sea-bottom there would be a tolerably plane surface of boulder clay, drift-gravel and sand extending across from Langness to the Castletown side of the bay, at the same general level as the terrace of drift which now only circles it around.

In few words, then, there was at one time a line of cliff extending from the Stack of Scarlet to the point of Langness, similar to that which is now seen three miles inland from those points at the Head of Castletown Bay. Let us suppose that here the sea began its eroding work upon the drift-gravel platform, and how many thousand years has it been in eating its way up to Hango Hill? We have said that in 1662 (O. S.), when William Dhone was here shot to death, the cliff was probably removed from thirty to forty feet from the building. Let us reckon the work of destruction to have been sixty feet in the last 200 years (and the old maps of the island, and the situation of Castletown Harbour itself forbid us to allow much more), and we have one yard in ten years, that is, at this rate of waste it requires more than 50,000 years for the excavation of Castletown Bay.

When the sea cliff was more exposed no doubt its destruction would be much more rapid, and we therefore may very well make a considerable reduction on the above period. But when we have even halved and quartered it, there are years enough remaining to make one start back in amazement at the conclusion at which we have arrived.

Yet we have not done with the question of the 'drift-gravel platform, and the ages consumed in its destruction. Relics of this platform remain on the coasts of all the countries surrounding the Isle of Man, on the coasts of England, Wales, Ireland and Scotland; and there is every evidence we can desire for showing that by it were these countries connected together, and that at the same time and in the same manner England was connected with the continent of Europe\*. This drift-gravel, then, occupied the whole area of the present Irish Sea; and the cliff which we have spoken of as extending from the Stack of Scarlet to Langness Point, we may on the same considerations remove in ages long before to a line across the mouth of St. George's Channel. Now bid the Ocean do its work, and then calculate the ages it would be occupied in making its cutting and removing the excavated materials between St. David's Head and the Head of Castletown Bay.

In speaking of the *destruction* of this great gravel platform, nothing has as yet been said of the time taken up in its *formation*. We have not spoken of the years during which the different pebbles, of which it is in great part composed, were being rolled about and rounded into their present shape, after they were broken off from their parent rock and exposed to the action of the tides upon the coast. We have hardly yet alluded to the fact that many of them existed in the shape of pebbles in an older formation (the boulder clay), out of which they were washed and sifted and sorted ere they were distributed in layers in the more recent drift. Nor have we touched upon the consideration that the rock itself, from which they were originally broken off, was once a bank of sand or mud, which had been formed by quiet deposit of layer upon layer at the bottom

\* See Professor E. Forbes' papers in the Appendix.

of the sea before it was consolidated, and then heaved up to become a coast-line, and again exposed to the breakers. Still would there be the consideration of the wave upon wave which broke upon that first granitic mass which appeared above the primæval ocean, and so wore it away particle after particle to form the *first* sedimentary deposit. We can measure our own age, and the age of our most lasting works, by the grains of sand which run through our hour-glasses; but to measure the age of those very sands, we must apply cycles made up of the revolutions of the sun itself about the far-off centre of our sidereal system.

From Hango Hill we may start on a short excursion round Langness, which, as may be seen by reference to the geological map, will bring us into acquaintance with three distinct palæozoic formations within small compass—the Schist, the Old Red Conglomerate and the Limestone, being the representatives of the Silurian, Devonian, and Carboniferous periods. The Old Red cropping out from under the limestone on the eastern side of the bay, and reclining upon the schist, we can walk across the basset-edge, and within a very short space get an insight into the order of deposition and the character of the rocks.

As we pass along the shore at the head of the bay in an easterly direction when the tide is out, we can break up with our hammer one bed after another of the lower limestone series, consisting of dark-coloured limestones and shales; and without much trouble can gather together a fair collection of the characteristic fossils; Gigantic *Turbinolia*, specimens of *Productus hemisphæricus*, *Orthis Sharpei*, *Leptæna papilionacea*, *Bellerophon apertus*, and *Cirrus rotundatus* meet the eye.

The limestone rocks in the north-eastern corner of the

bay, just before we come upon the old red conglomerate, are of a brown arenaceous character, and highly crystalline in texture. I believe they have been much altered by the escape of heated gases, containing acids, through the cracks formed at the period of the intrusion of the trap of this neighbourhood amongst the subjacent beds of the old red conglomerate. We very soon come upon a narrow trap-dyke, running at first southward down the axis of the saddle, into which it has thrown the old red conglomerate, till it reaches the great dyke, which, intersecting the peninsula of Langness, crosses Castletown Bay, and is observed again in the harbour between the old and new piers. It requires a practised eye to distinguish the trap here amongst the sea-weed and pools of muddy water which the higher tides only just reach.

This corner of the bay is a place of great resort for wild-fowl, ducks and geese, which "*dulcibus in stagnis rimantur*;" and here too the long-legged solitary heron may oftentimes be seen lazily flapping his wings and drying himself in the sun.

It is also interesting to mark on the shore a series of large boulders of porphyritic greenstone, placed in a line nearly due east and west magnetic towards the limekilns which are on the opposite side of the bay, near the Stack of Scarlet, and to connect with them the fact that close by those limekilns is a large boulder of the same rock, and that there is an outburst of apparently this same rock at the northern extremity of Langness, at a point which is just eastward of these blocks which we see on the shore. We shall find also that the groovings and scratches on the limestone under the boulder clay, near the Stack of Scarlet, have all this same direction, which we may therefore reasonably believe to have been the direction of the current which drifted away the blocks from the northern end of



Langness, and also the direction of the general drifting current of that period.

Close by the gate which leads up to Langness Farm-house we catch sight of the schist, which has been brought up by the fault which elevated the Langness Peninsula. It is highly ferruginous and claret-coloured, as is generally the case immediately under the old red conglomerate. We soon lose sight of it under the drift-gravel.

As we proceed southward we cannot help noticing the old coast-line prior to the last elevation; it seems more distinctly preserved here than at any other point. The low ground along the margin of the bay, made up chiefly of shingle, and covered with a scanty vegetation, was at that time between high and low water, it is now elevated from eight to ten feet above the highest tides. On the opposite side of the bay, near to Scarlet House and Sea-view, we have at the same level beds of shells of a recent date, such as *Littorina rudis*, *Littorina littorea*, *Purpura lapillus*, *Patella vulgata*, and *Buccinum undatum*.

Just at the point where the road ascends from this lower beach to the higher terrace of the drift-gravel, we have another trap-dyke having the same general direction as that before noticed to the northward, but more distinctly exhibiting ramifications amongst the beds of the old red conglomerate\*. The ground-plan of it is well-worthy of a minute study, and the contrast of colour of the two rocks (the *green* or olive-coloured trap and the *red* conglomerate) renders the phenomena distinctly visible to even an un-geological eye. The trap seems to shoot out in one strong body from the schist to the eastward, and may be seen as a dyke of the breadth of forty-five feet, where it runs out to sea on the eastern side of the Peninsula; but as soon as it enters upon the old red conglomerate, which overlies the

\* See Plate VII., section 4, and Plates II. and III.

schist, we find it separating into branches, and twisting about amongst the pebbles and boulders of that formation in a most singular manner. Some of these branches taper off to an extreme thinness; we can trace them by the colour till they are scarcely the thickness of a wafer. Now on the opposite side of the bay, at Knockrushen, we see this dyke\*, where it cuts through the limestone in the same solid and compact form which it has where it cuts through the schist. There are there, to be sure, two or three straight cracks in the limestone, which have been filled up by the fluid trap injected from this dyke; but the *general* fact which we must observe is this, that in the schist and tough limestone the trap-dyke is compact; in the old red conglomerate it is spread out and branching. And thus we come to the conclusion that the fluid trap was forced upwards with enormous force through the schist; that when on its ascent it reached the more permeable and separable beds of the old red conglomerate, tied down as they are by the tougher masses of limestone, it spread itself out, and ultimately raising the limestone in a boss or saddle, produced a crack, or series of cracks, and so forced its way through the opening to the surface. And I believe we must in this manner account for the great number of undulations and bosses on the surface of the limestone, which we meet with in this area wherever the removal of the tertiary formations by the denuding action of the sea enables us to examine any extensive portion of the surface.

All the rocks in contact with the trap are more or less altered, and from the minute crevices into which it has evidently insinuated itself, there is every reason to conclude that it was in a molten condition when it rose to the surface. At the same time it appears probable that it was accompanied by a discharge of gases containing acids, which

\* See Plate II.

were forced into more minute cracks and between the bedding of the limestone, and hence the altered and crystalline condition of these limestones, even at a considerable distance from the trap-dykes, or at any rate where the trap does not appear at the surface.

In passing further down the coast to the south-westward, we may trace one of the branches of this great dyke winding itself about in a very remarkable manner, till at length it intersects a large bed of greenstone at a point where the schist comes out more distinctly from under the drift, and presents a cliff to the westward. Unfortunately a mass of debris prevents our examination of the circumstances of this intersection, and the drift-gravel also hinders our tracing this branch dyke any further to the south when it has crossed the greenstone\*.

Parallel with this greenstone bed we meet with three others within a hundred yards in passing along the cliff; if we must consider them as dykes, we must observe that they do not penetrate the old red sandstone; but as they lie in the plane of the schists, or nearly so, and have the same strike, viz. N. 85° W., the probability is that the greenstone was either poured out upon the bed of the sea at intervals during the deposition of these schists, or accumulated there in the form of volcanic ash, as we shall see was the case afterwards in the carboniferous period, when we examine the trap tuff at Scarlet Head and in Poolvash Bay.

The lovers of pic-nics and rustic parties have found a spot every way suited to their innocent festivities, at the caves and natural arches which lie a little further south along shore. The fault, on the south-eastern side of which the peninsula of Langness has been lifted, as we have hitherto traced it, runs nearly due west magnetic; it seems

\* See Plate III.

however just at this point to make a sudden turn, or rather there is a cross fracture meeting the other at an angle of  $70^{\circ}$ , and the direction it takes hence is about  $10^{\circ}$  west of south. The action of the sea when at a higher relative level with the land, dashing against the beds of the old red conglomerate thus shattered by the cross fracture, has carved out a series of sea-side grottoes, romantic arches and grotesque pillars, and pinnacles of rock. The strata being of different degrees of hardness, and dipping at a low angle towards the centre of Castletown Bay, have suffered unequally from the destructive beat of the waves; and the erosion has been much greater upon some of the beds of the conglomerate than on others, and hence the strange variety of outline presented to our view. Uncouth faces, outvieing the poppy-heads of mediæval architecture, seem to be grinning down upon you from every nook and cranny. Gigantic noses, gaping mouths fashioned out of the boulders, and white quartz pebbles, which protrude from the red mass of the conglomerate, topped with rude wigs of hoary lichen moss and saxifrage, startle you on every side. There is one isolated mass which has oft reminded me of the dons of our ancient English universities on commemoration days in cap, wig and scarlet robes; in fact, there is hardly an animal or figure which does not meet with its caricature amongst these romantic rocks. And the peep out through the archways, the cracks and the chasms in the rock upon the bay, and the country which backs it, is particularly pleasing.

I remember well the autumnal eve when in a sea-side ramble I first came upon the unexpected beauties of this spot. It was quite a discovery, for not a rumour of it had reached my ear, though I had been in the neighbourhood several weeks. Not a breath crimped the azure sheet of water spread before me. A few fleecy clouds were cresting

South Barrule and Ireyna-Lhaa, which cast their long shadows athwart the landscape, and from the many white-washed cottages which stud the mountain's side, were rising steadily on high wreaths of smoke, doubtless redolent of turf and herrings. A gleam of sunlight shot through that singular aperture at the southern extremity of the Calf Islet called the Eye, and came streaming along in a glorious ruddy pencil over the calm surface of the deep. Here and there a sail was flapping to and fro in lazy mood, whilst the hull attached to it was drifting along on the tide and currents which sweep by the coast. Directly across the bay, the dark basaltic pile of Scarlet Stack was casting a still darker patch of shadow upon the waters. At the point where I was sitting, just under the archway, Castletown itself was hid by a mass of rock directly in front; but the voice of the bells of the chapel of St. Mary summoning to the Wednesday evening service, and the steady beat of oars in the rowlocks of some boat which was making its way into the harbour, came floating to my ear upon the dewy wing of eve. The College formed a distinct object through an opening to the north, with the picturesque ruin on Hango Hill in advance of it\*. On ascending the cliff I was suddenly struck with what I took for a star of extraordinary brightness, just visible on the outline of the Calf; I watched it a few seconds, it grew fainter and fainter, and at length disappeared; presently it shot forth again with increasing splendour: it was the lower of the revolving Calf lights.

There is in this southern area of the Isle of Man no example of the unconformity of the old red conglomerate with the subjacent schist more distinct than that presented to the eye of the geologist at these caves, and there is none

\* See view of the Caves on Langness.



*Natural Arch on the Western side of Langness.*



affording a more useful lesson for the tyro in such studies. The abutments of the arch last-mentioned consist of claret-coloured schist somewhat contorted, but having a general dip  $55^{\circ}$  W. magnetic at an angle of  $50^{\circ}$ . The different layers of the schist are rendered distinct by their varying tints. The crown of the arch consists of the old red conglomerate, the coarseness of which and the size of some of the boulders cannot but cause surprise. It looks extremely like a consolidated ancient boulder clay formation, only there is more approach to distinct bedding, more regularity of stratification, as in the drift-gravel deposits. Was it accumulated under similar conditions of climate and in a sea of like character? Were there periods of excessive disturbance of the ocean bed, storm periods, so to speak? Had the extraordinarily bony character of the fishes of the old red sandstone (the *Osteolepis* or bony-scale, for instance) anything to do with such a condition of the element in which they lived? Was it so that those strange trilobitic-looking fishes of that æra (the *Coccosteus*, *Pterichthys* and *Cephalaspis*) had to endure the buffeting of icy waves and to struggle amidst the wreck of ice-floes and the crush of bergs? These are questions which we may perhaps venture to ask, but which we dare not hope to have solved till we know something more than at present we know of the history of the boulder clay formation itself.

We might spend much time upon the southern extremity of Langness, if time were at our disposal, most usefully and agreeably. It is intersected by trap-dykes, and forming angles with these are two parallel greenstone dykes\*, which seem to have originated the ridge running out in a westerly direction and terminated by the Scaans. The schists, as before observed, are remarkably contorted between these

\* See Plate II. and Plate I., section across the island.



dykes\*. From this locality we may distinctly mark how the old red conglomerate and limestone, which were once continuous over the whole peninsula of Langness, have been denuded and remain only in depressions on the western side where protected by the greenstones and schists. We have thus some evidence of the direction of the denuding currents.

Even the capping of drift-gravel has its interest, and the scenery around is of the finest description; it affords us the most magnificent land-view we can get of the entire mountain range of the island, and ought not to be missed by any one who wishes to get a just idea of the structure of this side of it. For this purpose we may ascend the building erected on one of the highest points, which I cannot learn has ever been used for any other purpose than a land-mark, but which possesses all the characteristics of the round towers of Ireland.

There are some exquisitely picturesque chasms all the way up the eastern side of Langness, and a reference to the geological map will show that the schist is extremely well-developed, and a good insight afforded into the manner of intrusion of the igneous rocks and the nature of the intersection of those of different age, as for instance, the mass of greenstone to the north of the land-mark running in a direction S.  $70^{\circ}$  W. magnetic, with the more southerly of two large trap-dykes which intersect the peninsula.

At the northern extremity, the great development of porphyritic greenstone may be well studied; and also the appearance of gravel terraces, though the plough has too much disturbed them for any accurate observations on their different levels, if there have ever really existed more

\* In a specimen now in the museum of the Geological Society of London, there are three contortions as acute as a ridge-tile within the length of a single foot.

than the two marked ones of the before often alluded to drift-gravel platform and the terrace of the last raised sea beach.

The little isle of St. Michael\* (commonly called Fort Island), on which stands the fort and ruined church, is connected with Langness at its northern point by a narrow causeway. The causeway is built across two not very wide trap-dykes, which are nearly parallel with a general direction magnetic N. 18° W. They appear again at low water, crossing the ridge on which stands the Derbyhaven breakwater. The greenstone also appears in some force at the northern extremity of this causeway, and is protruded in bosses amongst the schist. It is observed at low water in several places along the eastern shore of Derbyhaven†.

This diminutive islet seems to have had considerable importance attached to it in ancient days. Perhaps our posterity may discover that in this respect our ancestors were wiser than we are. Camden will have it‡ that this was the ancient Sodor, and that in it Pope Gregory IV. founded a bishopric which he named Sodorensis, and which had jurisdiction in times past over all the western islands. Whence he got his story is uncertain, but it is certainly incorrect.

There can be no doubt of the great antiquity of the little chapel or oratory at the west end of it. Two centuries ago, as figured in Chaloner's 'Description,' it was a ruin. It re-

\* In the old map of the island, Plate IV., it is called St. Mighil's Island.

† See Plates II. and III.

‡ "Their chief town they count Russin, situate on the south side, which of a castle wherein lieth a garrison, is commonly called Castle-town, where within a little island Pope Gregory IV. instituted an Episcopal See, the bishop whereof, named Sodorensis (of this very island as it is thought), had jurisdiction in times past over all the islands."—Camden's *Britannia*, folio, page 204, Scotland.

minds us strongly in its architecture and general details of the interesting church of Peranzabuloe in Cornwall, described by Mr. Collins in 'The Lost Church Found.' It differs however in the number of windows. The church of Peranzabuloe was lighted by but *one*, this has *four*, an east and a west window, and a north and south placed very near the east end. The west, north and south windows are square-headed, the two latter being only twelve inches wide outside, but with a wide splay to two feet ten inches inside. The east window is one long single light, with a semicircular head and only ten inches in breadth outside, but largely splayed.

This little chapel is of but one compartment, whose length is thirty-one feet and breadth fourteen. The thickness of the walls is three feet. At the west end is a simple bell-turret. The chapel was entered by one door on the south side nine feet from the west end, the height of which is six feet, and the width two feet four inches. This door, like the east window, has a semicircular heading, formed of small pieces of the schist of this neighbourhood set edgewise round the arch, whilst the door-jambs are of rough blocks of limestone. There is no appearance of a tool on any part of it, if we except the coping-stones on the west gable.

We may mark the foundation of a stone altar under the east window, and at the same end in the north corner, three stone steps which may have served as an ambo or pulpit. The height of the side walls of the building is only ten feet. The length of its graveyard is 192 feet and the breadth ninety-eight, and as yet it is untouched by the plough: this is more than we can say of many other similar chapels scattered up and down the isle. Witness St. Catherine's Chapel in Christ's Rushen parish, which is inserted in the old maps of the island.

It has been stated by some writers that the chapel was dedicated in honour of St. Mary; it seems more probable, from the name of the little islet on which it stands, that St. Michael was the patron. The orientation of the building is E. by N., and singularly enough falls directly in a line with the little chapel in Castle Rushen before mentioned, and, if I mistake not, with the ruined chapel at Port-St.-Mary. If we dare place it along with the church of Peranzabuloe in Cornwall in the same century as the oldest recorded stone church in Great Britain, viz. that of Candida Casa or Whithern, *i. e.* Whitchurch in Galloway, which is said to have been erected about 448 by St. Ninian, it may be well to bear in mind the close connection of Whithern with the See of Man in ancient times. The priory of Whithern was endowed with lands in this isle, for which the Prior was wont to do fealty to the lord\*.

How much of Manx church history might be found to hang upon the history of this little oratory! How much of private history too may be attached to it! How many a mariner, owing his safety to the light streaming from yonder eastern window at the hour of evening prayer, or to the sound of the vesper bell swinging in that humble turret on a dark and stormy night, may have come to offer up his thanksgivings within the lowly roof with a fervour no less, but with a faith more pure, than those whose dripping garments and votive offerings were wont in still

\* At the Tynwald Court, held A.D. 1422, called by Sir John Stanley as Lord of the Isle, we find the Prior of Whithern in Galloway, the Abbot of Bangor, the Abbot of Sabol, and the Prior of St. Bede in Copeland, were called in but came not, therefore they were deemed by the Deemsters that they should come in their proper persons within forty days, and if they came not then all their temporalities to be seized into the Lord's hands.—Sacheverell's Account, p. 84.

more ancient days to be suspended in the splendid marble temples of the Pagan sea-god\*!

And what a testimony do these roofless walls, overspread with fern, and this holy area grown over with moss and nettles, bear to the decay of primitive piety, which reared even in wild districts so many houses of prayer†, whence also the waters of life gushed forth and refreshed from time to time the thirsty land! When may we hope for the restoration of spots once hallowed by such uses? Such restorations would be both the evidences of new life in the church and the cherishers of it.

At the northern extremity of this little islet of St. Michael is a circular embattled fort, which, according to Chaloner‡, was raised by James, the illustrious seventh Earl of Derby, as a protection to the harbour of Ronaldsway. Over the doorway is an oblong stone with an earl's coronet in relief, and the date 1650, as I read it; but the third and fourth figures are very indistinct, and have had different values given to them by different parties§. If the date be 1603, as stated by Train, and the building is

\*

“ Me tabula sacer  
Votiva paries indicat uvida  
Suspendisse potenti  
Vestimenta maris Deo.”

Horace, Od. I. 5.

† In the old Manx ballad of the early part of the sixteenth century, there is a traditional statement that the oratories or quarterland chapels (in Manx *treen caballyn*) were built by St. German, but that afterwards St. Maughold, by throwing several quarterlands into one division, formed the seventeen regular parishes which we now have.

‡ Chaloner's Description of the Isle of Man, p. 31.

§ Feltham reads the date 1667, which would bring the erection of the building to a period after the great rebellion. But Chaloner, writing in 1653, speaks of it as built by the late Earl of Derby. Feltham's reading is thus plainly incorrect.

to be attributed to the prudence of Queen Elizabeth when holding the island, as before noticed, we still have the difficulty of the coronet and the statement of a contemporary, Chaloner.

The thickness of the walls is eight feet, but they are not solid throughout. Thirty years ago it was furnished with four iron cannons. A turret has been raised upon the wall on the eastern side as a lighthouse, in which, during the herring season, a light is kept burning from sunset to sunrise.

## CHAPTER VIII.

The port of Derbyhaven—Its great natural advantages.—Singularly embraces in its circuit every rock and soil in the island.—The battle-field of Ronaldsway.—Great events of the thirteenth century.—The Scottish conquest.—Richard Mandeville, the Irish freebooter.—The lower limestone fossils of Ronaldsway.—Skillicore bosses.—Great disturbance at Coshnahawin.—Valley of Santonburn.—M'Culloch in error.

THE port of Derbyhaven, which appears to have been anciently called Rognalwath, Ronaldswath, Ramsway and Rannesway, and so Ronaldsway, was formerly of considerable importance, and with the northern harbours of Ramsö, now Ramsey, shared a large portion of the traffic of the eastern side of the island.

But times have indeed changed since the commencement of the eighteenth century, and there has been from that day forward a gradual increase of the tonnage entering the harbour of Douglas, and a proportionate decrease in that entering the other ports of the island. The contraband trade, then the erection of the pier at Douglas, and the restriction of import of all licensed goods to that harbour\*, have latterly hastened the consummation. The circumstance also of the great owners of property in the immediate neighbourhood of Derbyhaven having a larger interest at Douglas operates disadvantageously to the former place.

The Castletown people are content with their own har-

\* This restriction has within the last two years been partially removed.

bour for general purposes, and seem perfectly satisfied to be at the expense and risk of land-carriage from Douglas for articles of less urgent and more uncertain demand, and even some of the larger shops are but branches from head houses of business there.

There are certainly very great capabilities in this harbour of Derbyhaven, and it seems a great pity that they are not called into play. A breakwater was erected a few years ago on a ridge of limestone running out southwards from Ronaldsway-house; but though a great protection to small vessels lying in the inner harbour during a storm from the east, yet it can assist little towards the traffic of the place, as there is no pier for landing goods.

A strong jetty thrown out for 100 or 150 yards, in a north-easterly direction into the bay from a point near the fort, would afford perfect security at all times to vessels of considerable burden; whilst a landing-pier, as a continuation of the high road at Derbyhaven into the inner harbour, would afford a great convenience to the neighbourhood, and supersede the frequent necessity for going round to the Castletown-pier for the purpose of unloading vessels. It would not require any very great outlay to effect this. The very best materials, the limestone both for building and burning, are on the spot, and, when finished, the harbour would be not only the best in a commercial point of view in the island, but probably the best as a harbour of refuge in the north-eastern portion of the Irish sea. At the same time it would be highly desirable to cut through the narrow isthmus of about 150 yards, separating Castletown-bay from Derbyhaven, and which consists only of sand, gravel, and boulder clay: by this means Derbyhaven would be rendered an immediately available port for Castletown, and whichever way the wind lay, vessels might find ingress or egress into either harbour.



Should this ever be effected, the result upon the exports of this part of the island must be highly advantageous.

The great agricultural produce of the Isle of Man is from the northern area, in the neighbourhood of Ramsey, and the southern round about Castletown; the neighbourhood of Peel furnishes also a considerable portion. The great mining district on South Barrule, as well as the great granitic boss there, is nearer to Derbyhaven than to Douglas the present chief port of shipment of the lead and the granite. Then we have the umber works at Ballasalla, and the lime from the several kilns in that neighbourhood, as well as in Derbyhaven itself. We have again the black marble of Poolvash, which is wrought in Castletown, of which the steps of St. Paul's Cathedral are made, and for which there has lately been a renewed demand for purposes of ecclesiastical architecture, both on the island and in England. And, though last, not least, there is the fine mass of porphyry which has hitherto been untouched at the northern end of Langness, a rock harder and more durable than the granite; and if, on account of the difficulty of working, not generally available for building, yet an excellent material for roads, and one to which attention ought to be directed as a subject for export and for use on the island, in the neighbourhood of Douglas and the sandy districts of the north.

A simple reference to the geological map of the southern limestone basin of the Isle of Man\* will show that, with the exception of granite and Poolvash marble, every rock and soil in the island is contained within the limits of this fine bay. There is the clay schist in several varieties, forming St. Michael's Islet and the eastern boundary of the bay. This is intersected with trap dykes and masses of porphyry, which protrude through them at several points along

\* See Plate III.

shore, as well as at the northern point of Langness. It is singular to observe how the schist mantles round these bosses of porphyry, and how much they have been altered where in contact. In the southern corner of the bay we have the old red conglomerate resting unconformably on the schist, which here dips S.  $80^{\circ}$  E. at an angle of  $20^{\circ}$ ; whilst the dip of the old red is N.W. magnetic. Presently the limestone sets on; but proceeding westward we again for a few yards fall in with the old red conglomerate, which is brought up by one of those singular bosses which we shall have such frequent occasion to notice in this locality; the limestone from the crown of the boss having been denuded shows the nucleus of old red. We have then forming the bed of the bay, on its eastern side, the carboniferous limestone, on which reposes the boulder clay in the northern angle, and which also forms the holding ground at the entrance to the bay off St. Michael's Isle, and then all round the bay above high water we have the drift-gravel and the sand of the more recent-raised beach.

The northern corner of the bay adjoining Ronaldsway forms an interesting study for the geologist. The anticlinal ridge upon which the breakwater is built is intersected at right angles by the two dykes which were noticed under the causeway joining St. Michael's Isle with Langness. The limestone is greatly altered and contorted, and as we proceed north-eastward the bosses on the surface become more important. We are in fact tracing along a line of disturbance, which, commencing near the caves on Langness, increases in intensity up to the Brough, and Coshnahawin at the mouth of the Santon river.

Very near the limekilns, which are at the northern extremity of Derbyhaven, the line of low water is the old red conglomerate coming out from under the limestone; but between the two series, or rather incorporated with the old

red, appears a tabular mass of trappean conglomerate or of quartz pebbles, apparently mixed up in a trappean matrix. The limestone overlying this bed is cracked and altered in an extraordinary degree, and I cannot but regard it as confirmatory of my view as to the origin of the bosses, thus to find traces of igneous action so closely connected with them.

There is one remarkable fact which should not be overlooked, which is, that the boulder clay itself seems in some measure to have partaken of the metamorphosed character of the limestone. Patches of it here and there are hardened and cemented, and present a baked appearance, and have resisted the action of the sea. It is difficult to determine whether this has resulted from long contact with the ochreous masses of altered limestone, or from the escape of heated gases at some period of the boulder clay through cracks formed by the previous disturbances, or whether the alteration was coincident with those disturbances which we must thence class as belonging to the boulder period. The locality where this is particularly to be noted is one hundred yards north of the limekiln, and very near the stream from Ballahick, where, passing by the mill, it enters the sea in a small recess, which I have always known by the name of Ronaldsway Creek. There is a line of disturbance running from under the drift gravel which forms the battle-field of Ronaldsway, in a direction N.  $80^{\circ}$  E. magnetic, crossing the general strike of the beds for a distance of sixty yards, and then gradually disappearing. Along this axis unequivocal tokens of igneous action are afforded, and parallel to it it is worth while to observe all the way to Coshnahawin a series of cracks and disturbances with the same evidences of metamorphism about them.

The battle-field of Ronaldsway, though little noted in

British history, was once the scene of a memorable struggle for the liberties and independence of the Manx nation, and determined its fate. It may be well to take a review of the history of the isle for a few years preceding that event.

When the usurper Reginald (the same who surrendered the isle to Pope Honorius—surrendered in fact that which did not belong to him,) was slain at the great battle of the Tynwald Hill, on St. Valentine's day, 1229\*, the crown settled quietly on the head of the rightful king, Olave the Black, called in the Chronicon, Olave Godredson, being the son of Godred Kleining. He died in 1237, leaving three sons, Harold, Reginald, and Magnus.

The former reigned ten years, and perished by shipwreck on the coast of Rudland, with his young bride, Cecilia, daughter of Haco, sovereign of Norway, and a numerous train of nobility, and Lawrence, then Bishop elect of Man.

On the 6th of May in the following year Reginald assumed the reins of government, but was murdered in a meadow near the west end of Trinity Church in Rushen, by the knight Ivar, brother of the usurper Reginald.

Magnus, the last surviving son of Olave, was at this time resident with his father-in-law, Ewen Konongr or John Dugalson, in one of the Hebrides, and the government was seized (A.D. 1250) by Harold, son of Godred Don, and grandson of Reginald.

Haco, hearing of this usurpation, summoned Harold to Norway, and there cast him into prison. He then deputed Ewen Konongr to hold the sovereignty of Man during the minority of Magnus Olaveson. John, arriving in Man, and disembarking at Ronaldsway (A.D. 1250), proclaimed himself king of the Isles. The Manx, provoked at this presumption, rose in a body, attacked his army,

\* See Chronicon Manniæ, p. 30.

which was encamped on St. Michael's Isle, and totally defeated them.

Magnus himself was gladly received in 1252, and acknowledged king by the Manx nation at large, and received afterwards a confirmation of his right and title by the sovereign of Norway, 1254, and was knighted by Henry III. of England in 1256\*.

The battle of Largs, Oct. 3, 1263, in which Alexander III. of Scotland so completely broke up the expedition of Haco, placed the isle at the mercy of the Scottish monarch; and Magnus, despairing of help from Norway, met Alexander in a conference at Dumfries, did homage to him, and obtained a charter to hold the island from the crown of Scotland.

In 1265, on the 24th. of November, died in Castle Rushen, Magnus, the ninth and last of the race of Godred Crovan, which for nearly 200 years had held the sceptre of the isle as viceroys to the monarch of Norway. He was buried in the church of St. Mary of Rushen, which had been finished and dedicated in the fifth year of his reign, by Richard "*Sodorensis Episcopus*," and left no issue.

The following year, Magnus, king of Norway, successor to Haco, ceded to the Scottish king his right and title to the Isle of Man and the Hebrides, in consideration of 4000 marks sterling, in four yearly payments of 1000 marks each, and an annual quit-rent of 100 marks for ever.

In the mean time (to use the words of Sacheverell), the widow of Magnus, a woman haughty and intriguing, and secretly in love with the knight Ivar (who by the murder of her brother-in-law Reginald, had cleared the way to the crown), thought him the fittest person to supply the vacancy.

There was no lawful successor except the daughter of

\* See *Chronicon Manniæ*, p. 40.

Reginald, and she a child; the danger from Scotland seemed pressing, but what will not love and the temptation of a crown persuade men to? Ivar, therefore, in the vigour of his age, gay, generous and popular, the boldest, the bravest, the most licentious, and yet the best of all the natives, one who had virtues enough to save, and vices enough to undo a nation, readily embraced the offer, and Mary\* was secretly conveyed into England with all public deeds and charters by those who had the care of her, equally fearing the danger from abroad and at home. Ivar vigorously prepared for the defence of his newly-acquired government, and resolved at least to deserve, if not enjoy, the crown. But the Isle of Man could do little singly with the more potent kingdom of Scotland; for Alexander, having now reduced all the out-isles, sent a numerous army under Alexander of Paisley and John Comyne, who landed at Ronaldsway in the year 1270†. Ivar, though much inferior in numbers (being deprived of all foreign assistance), received them with a resolution natural to the Manx nation, stoutly fought and as bravely fell with the expiring liberties of his country, and with him 537 of the flower of the people. The monks of Rushen have preserved this number in the following doggerel epic verses—

\* This Mary in the year 1292 claimed the kingdom of the Isles, and did homage to Edward the First of England in Perth or St. John's town. Though the Norwegian royalty descended in the male line, yet we find nearly 400 years after that, on the plea of the validity of Mary's claim to the sovereignty of Man, sentence was pronounced in favour of the heirs general of Ferdinand Earl of Derby, against his brother, Earl William, though afterwards it was settled by the British Parliament in favour of the male line.—See Sacheverell's Account, p. 60, and Chaloner's History, p. 15; also p. 59, *supra*.

† According to the Chronicon Manniæ, 1275.

L decies X ter et pente duo cecidere  
 Mannica gens de te damna futura cave \*.

This distich might almost be deemed prophetic, for we find not many years after that the Manx suffered most severely from foreign enemies landing at this same spot. In May 1316, on Ascension day, Richard de Mandeville, and his brothers, John and Thomas, with a company of Irish freebooters, landed at Ronaldsway, and demanded of the Manx supplies of provisions, cattle and money. Their request being rejected, they formed themselves into two divisions, which marching up the country, again united at the foot of South Barrule; then uttering the Irish war-whoop, they fell upon the Manx who had there drawn up their forces to receive them. At the first onset the Manx fled in a body. The victorious Irish, roaming through the country, plundered it of every thing on which they could lay their hands. The sanctity of the venerable Abbey of Rushen availed nothing against this lawless company; they stripped it of all its furniture, flocks and cattle. Spending a month in this manner, and at their leisure digging up much silver which had been buried in various places, they stowed their vessels with the best effects of the country and returned safe home.

The estate of Ronaldsway belonged to William Dhone; and at his execution as a traitor at Hango Hill was confiscated. It was afterwards restored to the family by an order of King Charles II. in council.

The geologist will find the creek of Ronaldsway a rich dépôt of fossils of the lower limestone strata. With a good heavy hammer, having one face wedge-shaped, he may go in amidst the alternating beds of shale and limestone at low water, and, raising the layers, extract some of

\* Ten Ls thrice X with five and two did fall;  
 Ye Manx, take care, or suffer more ye shall.

the rarer organisms *ad libitum*. He will find here *Heteropora* a beautiful branching coral, *Turbinolia fungites*, *Cyathophyllum megastoma*, *Cyathophyllum crassum*, *Orthis Sharpei*, *Productus giganteus* and *Productus hemisphaericus*, several large encrinurites and remarkable fucoids.

It will be well for him to take hence a good collection, in order to contrast them with the newer limestone series, when he comes to study it at Poolvash in the centre of this great limestone basin.

But the points of most interest for one occupied in the study more especially of the physical structure of this district, will be the examination of the cracks, disturbances, contortions, bosses and trap dykes, which lie between this creek and the mouth of the Santon river\*. Here are very plain indications of two epochs of disturbance, the axes of intenser action running in distinctly different directions. We have one axis of disturbance running S. 40° W., with cracks and faults at right angles to that direction, and this seems particularly to be connected with the bosses and trap-dykes; the other running S. 80° E., with cracks and faults at right angles, and this seems connected in some way with the protrusion of greenstone masses. The great difficulty is in determining which was the anterior disturbance.

The great boss at Skillicore† is extremely interesting, from the manner in which it is intersected by a trap-dyke or assemblage of dykes. We have here a dyke, or rather a number of small cracks, filled with trap, and then uniting to form one dyke, which runs S. 85° E. magnetic on the line of the beds to the centre of the boss; it there separates again into two, one of which, after being a little contorted, is continued in a direction S. 80° E., the other running S. 50° E., and throwing out small branches which

\* See Plate VI.

† Ibid.



soon terminate. This latter presents evidence of great force exercised in the ascent of the fluid trap, the edges of the limestone beds being very sharply turned up along the dyke to the extent of half a foot on each side.

The limestone is singularly broken up into rhomboidal blocks by cracks which cross each other in directions S. 40° W. and S. 30° E. But along the great line of disturbance, where the rocks are suddenly brought up and turned over on an axis, the metamorphism is most complete; and it is extremely difficult to determine to what class of rocks, limestone or old red conglomerate, the mass originally belonged. The beautiful variegated appearance of the rock has led to some attempts to work it as a marble quarry, which have been defeated by the large admixture of quartz, and the fractured character of the rock.

The mouth of the Santon burn is one of the most picturesque spots with which I am acquainted in the Isle of Man. The valley down which the river runs into the sea is one of elevation, a great crack in the earth's crust in consequence of extreme tension across a saddle when the country was being elevated. Even an ordinary observer must mark how the salient points at one side of this lovely winding valley correspond to recesses on the opposite side of it; so that if the earth were to sink down again, we see at once that they would lock into each other just (to compare small things with great) as the teeth in a rat-trap when the edges approximate. The earth here in opening her mouth has exhibited a set of teeth, compared with which those possessed by the most monstrous Saurian that ever paddled in the secondary seas sink into utter insignificance.

We have before alluded to the beauty of this valley in its upper portion above Ballasalla or Fairy-bridge. The angler, as he comes rambling downwards from that bridge

towards the sea, will greatly be reminded of the favourite scene of his friend Isaac Walton's special enjoyment—the Derbyshire Dovedale—save that the gorge is somewhat narrower and in places hardly permits the sweep of the rod which throws the deceitful fly upon the purling water of the burn. But then the splendid opening out of the gorge into the sea, and the chances of hooking the salmon which sport about its mouth,—these well compensate for the other deficiencies, as compared with the picturesque features of the Derbyshire trout-stream.

Those water-worn caves which pierce yonder frowning crag, shattered and contorted as it has been by those masses of greenstone thrust up on either side,—how tempting the shade and retirement which they afford! and the golden gorse in spring time, and the purple heather in autumn, with all manner of wild flowers, grace the opposite slope, and drop their perfume on the gentle sea-breeze which comes swelling up the glen.

There is a romantic archway on the eastern side of the stream near its mouth\*, where the claret-coloured schist is contorted upon an axis of disturbance. A little higher up, on opposite crags, as the poet sings—

“immortal without mother,  
Which stand as if outfacing one another,—”

are the remains of two forts, rude earthwork embankments, the names and reputation of which, if ever they had any, have long ago passed away, and are amongst the things which are not. Woe to the occupants of either, had their hold been forced! something worse than Hobson's choice awaited them; it was no question between fighting and running away; a full tide might give a bare chance; other-

\* See the view “Coshnahawin at the mouth of the Santonburn.”

wise he who leapt that precipice would never have lived to fight another day.

The mass of limestone forming Coshnahawin Head was sometime ago a puzzle to McCulloch, as appears in his account of the Western Isles of Scotland; at least he has committed to paper two singular errors in reference to it which have since been taken on trust, and copied by Dr. Mantell in his most interesting work, 'Wonders of Geology.' He has stated, that the mountain limestone of this area rests directly upon the slate, and he has adduced the limestone of Coshnahawin\* as an instance of the crystal-line action of slaty cleavage passing upwards from slate into superincumbent limestone.

It may at first sight appear singular to any one inspecting the sections† which I have given, in which the old red conglomerate is seen interposed between the limestone and the schist, how such a mistake could have been committed, and yet the error is easily explained.

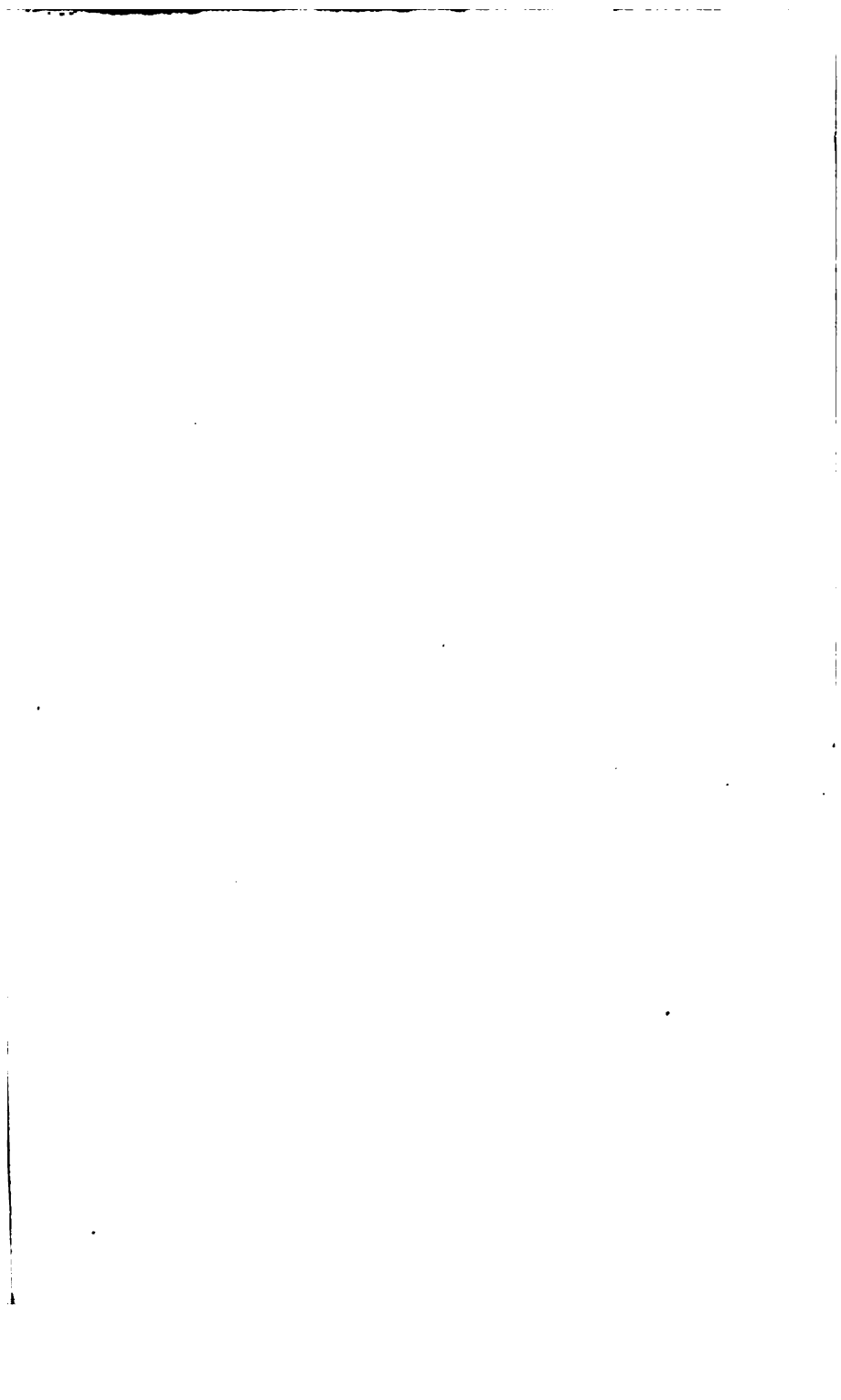
In the first place, at the time Dr. McCulloch wrote, the old red sandstone was grouped as a member of the carboniferous series; it remained for his two great northern fellow-countrymen, the authors respectively of 'The Silurian System' and the 'Old Red Sandstone,' to separate it into a system of its own and to work out in detail its separate members. Dr. McCulloch too had seen the old red as a formation of thousands of feet in thickness as it is developed in Scotland, spreading out over thousands upon thousands of acres: here, in this southern area, it can never be seen more than fifty feet thick, and its tilted

\* I believe this ought to be spelt Cas-ny-hawin, *the foot of the waters*..

† See Plate VII., sections 1, 2 and 3; and Plate VI., sections 2 and 3.



*Cashnahan at the Mouth of the Santonburn.*



basset-edge may be walked across anywhere in a couple of hundred yards.

Again, the subject of metamorphism of rocks had not at that time received the attention which has of late been bestowed upon it. The presumed slaty cleavage of the limestone is plainly due to the metamorphic action of the heated masses with which it has been connected at the period of disturbance.

Again, at this particular spot the schist is singularly brought up and placed in contact with the limestone by two faults, one running S.  $40^{\circ}$  W., which is distinctly seen on the sea-shore at the mouth of the burn near the caves, in consequence of the different colour of the schist on each side of the fault; the other caused by the upheaval of the country on an axis running S.  $80^{\circ}$  E., of which the caves, and the natural arch on the opposite side of the stream are the immediate consequences. There are other disturbances at right angles to these directions which give a somewhat complicated character to the geology of this spot, but the general and total effect of all is plain; the limestone at the Head is on two sides placed in contact with the schist, denudation of the upheaved portion of the country has removed the limestone and old red conglomerate to the northward, and it is only by diligent searching at low-water that the conglomerate is discovered with a thin basset-edge coming up from under the limestone and therefore plainly separating it from the schist. If however we mount the hill (the Brough) to the westward we shall discover the conglomerate in great force forming a fine escarpment to the seaward with a very clear sequence into the carboniferous series, and with it dipping down towards the centre of this southern basin at Poolvash.

The total lift of the bed of old red conglomerate by the two before-named faults combined is about 110 feet, the

bed seen at the mouth of the river being about ten feet below high-water, and where it appears again on the Brough being 100 feet above it. Some five years ago I had the gratification of going over the ground, and pointing out the details of this my almost first discovery in the geology of this neighbourhood, with Count Keyserling, the illustrious States Geologist of Russia and companion in travel with our own Sir Roderick Murchison, and coadjutor with him and Mons. de Verneuil in the researches which have resulted in that most noble geological work, 'Russia and the Ural Mountains.' His approval of this first essay was in itself a sufficient encouragement to proceed with the details of the whole area, to which it affords the key.

Before leaving this neighbourhood, the lover of the picturesque may make an attempt when the tide is out to cross the Santon burn at its mouth; and following the road which winds up the opposite bank, and tracing the edge of the low cliff for about a quarter of a mile north-eastward, he will come upon another little creek called Saltric, possessing a peculiar wildness about it, and at the same time, within a very small compass, a singular admixture of softened and harsh features in the same landscape. The recess in the coast is of a horse-shoe form, of which the horns are occupied by masses of schist and greenstone, a continuation of the same axis of disturbance which we have just noted at the mouth of the Santon burn and previously at Seafield, which is a mile to the north-eastward of this point.

In consequence of this axis of disturbance a synclinal depression has been formed a few hundred yards inland, but parallel to the coast: this depression has been filled up by the pleistocene-clay sand and gravel during the glacial period when the sea was at a higher relative level with the

land. On the elevation of the island, the sea has worked its way in at a cross fracture and largely eroded the soft pleistocene\* beds, whilst the harder schists and greenstone have been much more slowly acted upon.

The inner portion therefore of the little bay swells out with a softened outline and presents deep rounded gullies clothed with tender herbage and mosses or blooming with furze, broom and heath; the entrance to it from the sea presenting bluff precipices and dark water-worn caves, a favourite resort of the jackdaw in spring time. Here she builds her nest and rears her young.

\* In this locality may be obtained, more abundantly than in any other part of this southern area, fragments of the fossils of the pleistocene period.



## CHAPTER IX.

View from the Brough.—Varying composition of the pleistocene marls.—Return to Castletown.—Notice of recent raised beaches at various points along the coast.—Remarkable undulations of the limestone beds at the Stack of Scarlet caused by the protrusion of basaltic rocks.—Glacial striations, groovings and indentations.—Mud glaciers not solving the phenomena.—Recent action of littoral ice at Cape Blomidon in the Bay of Fundy affording a clue to the true solution.—Probable gradual sinking of this area at the beginning of the glacial period.

THE view from the Brough is sufficiently pleasing to repay the toil of the ascent, its height being not more than 160 feet above the level of the sea. The most toilsome way is really the most picturesque. About 400 yards above the caves the Silverburn makes a sudden angle, and its course from running nearly magnetic north is directed more to the east. The face of the valley is very steep here, but after mounting 100 feet we come to the top of the schist and meet the old red conglomerate very finely developed as a mass of boulders and pebbles of quartz, quartz-rock and grauwacke, in at first a deep ochreous setting, which, as we rise still higher, becomes at length a gray carbonaceous matrix. A station on the top of this old red-conglomerate, looking into the valley at the angle, presents an interesting scene both seaward and landward. In the latter direction we may catch glimpses of the course of the Silverburn for several miles up towards the mountains, and the structure of the valley is easily ascertained.

Proceeding onward towards the summit of the Brough we soon cross the basset-edge of the carboniferous limestone, and may observe its dip towards the centre of the basin.

The composition of the Brough itself may next engage our attention. It belongs to the boulder formation, which seems to attain to a considerable thickness upon it, if we may judge of it by a comparison of the height of the hill with the depth under its summit, at which, according to the dip of the beds, we should meet with the limestone. The extreme red colour of the soil on the hill would indicate that it is formed in great part of the denuded portions of the escarpment of the old red conglomerate which appears to the eastward above Coshnahawin Head. This is another evidence of the extremely local character of the lower portion at least of the boulder-clay-formation. As we proceed westward across this limestone basin we shall observe how it changes in composition, and tallies in chemical character, as well as in lithological appearance and colour, with that of the subjacent rock prevailing a very little to the eastward of any spot on which we may fix for its examination\*.

We may descend from the Brough to Ballahick, and thence get upon the high road between Ballasalla and Castletown, or we may take the road to Ronaldsway, and begin there to examine the evidences of the last raised beach, which we may then trace very distinctly all round the coast where there is no lofty cliff presented to the seaward. Just by the Mill at Ronaldsway we may observe perhaps in the bank an accumulation of a bed of sea-shells of recent species. We have before noticed the beach at

\* Through the kindness of my friend, George Kemp, Esq., M.D., of St. Peter's College, Cambridge, I am enabled to give the percentage of lime contained in the clay at different places on the Island. A reference to the geological map and sections will show at once its value, as bearing on the present question of the origin of the boulder formation; and it may prove acceptable to agriculturists, as indicating the best localities for marls containing the largest quantity of lime. See Appendix, Note I.

Hango Hill, and in proceeding thence towards Castletown we may perceive it very continuously at the back of the houses which front towards the sea all the way to the Bowling Green.

Let us set out again from Castletown towards the Stack of Scarlet. We have the same beach, with plenty of shells all the way round from Knockrushen by Sea-view and beyond Scarlet House. The same thing occurs at Poolvash, Strandhall, Mount Gawne, and Port St. Mary.

In passing from Castletown to the Stack of Scarlet, the series of trap-dykes which are seen between high and low water, the undulations on the surface of the limestone and its frequently altered character, will certainly attract attention. The great Knockrushen dyke, in width twenty-one feet (sending out three other smaller ones), I have supposed to be the continuation of the more southerly of the two great dykes which intersect Langness, and which we meet with again at Poolvash divided into three branches.

It is however evident, as we approach the Stack, that another disturbance than that of the trap-dykes has affected this portion of the limestone basin. The direction of the undulating ridges is changed, and the undulations become more frequent and marked. The long swell becomes the crested wave just ready to break upon the shore.

Close by the limekilns the contortions become very violent, and the great wonder seems to be, that the limestone beds have not snapped under the extreme tension. There is merely a jagged crack running down the crown of the undulation, though its curvature is as rapid as the rim of an ordinary sized carriage-wheel. Either the superincumbent pressure must have been excessive, or the beds were in an extremely new and plastic condition at the time of the contortion.

At these limekilns it is worth while to linger a little,

both for the fine view here afforded of Castletown bay and the adjacent country, and also to observe the groovings and scratchings on the surface of the limestone where the quarriers have removed the boulder-clay.

There are three kinds of markings to be noticed ; the deeper *polished groovings*, the *striations* or finer scratches *upon* the groovings, and the *indentations*. The direction of the first is very nearly magnetic east and west, a point north of east and south of west ; the second, though *generally* having the same direction as the groovings, *sometimes* cross them at acute angles ; the third have the appearance of being produced by some hard, sharp-pointed object brought suddenly in contact, grooving the surface for an inch or two, and then removed.

If we examine the action of the breakers upon the surface of the limestone, wherever it is exposed at the present time, we shall find the result very different to that seen on the rocks under the boulder clay. We have the proof plain before us, about one hundred yards south-westward of these limekilns, nearer the Stack of Scarlet, on a shelf of rock which is intersected by a trap dyke. The surface of the limestone, which is just exposed to the sweep of the waves at the highest spring tides, or when a storm rages from the south, is drilled with a series of holes of every size and depth. How are they formed ? Look at that pebble or heap of pebbles which lies at the bottom of one of these clear briny pools. These are the tools with which the work is done ; the natural augers which have pierced the solid stone. The effect is thus produced. The action of the atmosphere on a small crack or flaw in the limestone (and being in such close contact with trap-rock, and contorted so fantastically, no wonder that it is in some places much cracked !) produces a small hole. A little

pebble driven on by the breaker lodges in it: the next high tide sets the pebble in motion, and the instrument begins the drilling operation. As the hole increases, other and bigger pebbles or hard boulders find a lodgement there, and assist in widening and deepening the hole till it is too deep for the reflux surge to be capable of moving the collection at the bottom, and then of course the action ceases. Now here is plainly a very different result from that found on the surface of the rock under the boulder clay. Indeed, I am not aware of any instance in this neighbourhood where the sea now produces anything like the groovings, scratchings and indentations which we are now considering.

It has been suggested that the effect has been brought about by the sliding forwards of the entire mass of the boulder series upon the inclined surface of the limestone beds; in fact, the boulder clay has been spoken of as a kind of mud glacier, which, rolling onwards, has abraded the subjacent rocks, and left the traces of its course in those groovings and striations which in so many places meet the eye. Such an explanation might possibly stand had we to do simply with groovings, or with the striations only parallel to them; yet even in this case the objection would have to be met, that these do not always coincide with the dip of the rock; and further, that since it is now pretty generally allowed that the motion of glaciers is due to gravitation, and as this would be specially the case in the so-called mud-glacier, it would require a rather nice engineering adjustment of the inclines and application of forces for the motion to be propagated through several miles up one hill and down another to an extent which greatly taxes one's credulity. But the grand difficulty which still remains on this hypothesis is to solve the

problem of the cross-scratches and the indentations. I have never heard of such a solution, and I certainly cannot offer one.

And why should we go out of our way to frame hypotheses to account for these marks upon the rocks, made at the period of the boulder deposit, when we have similar phenomena to adduce of a recent date, where the cause and effect are distinctly set before our eyes in the closest possible connection?

Mr. Lyell has supplied us with the necessary data for determining the problem in his recent travels in North America\*. Strolling one day along the beach, at the foot of Cape Blomidon, in the Bay of Fundy, he was startled by observing, upon a ledge of soft sandstone, some recent furrows, the exact counterpart of the grooves of ancient date attributed to glacial action. Some of these furrows were half an inch broad, and very nearly parallel; others were rather divergent, and crossed each other. The direction of the parallel furrows coincided with that of the shore at this point. His guide was asked if ever he had seen much ice at this spot. He replied, that in the preceding winter of 1841 he had seen ice, in spite of the tide, which ran at the rate of ten miles an hour, extending in one uninterrupted mass from that side of the bay to the opposite coast of Parisborough, and that the icy rocks, heaped on each other, and frozen together, or packed at the foot of Cape Blomidon, were often fifteen feet thick, and were pushed along when the tide rose over the sandstone ledges. He also stated that blocks of a black amygdaloid, containing numerous geodes coated with quartz crystals, fell from the summit of the cliff, were frozen into the ice, and moved along with it. Need we say, that Mr. Lyell, like any other man whose mind has been trained in

\* Lyell's Travels in North America, vol. ii. p. 172.

the inductive principles of the Baconian philosophy, hesitated not an instant as to the agent which had produced the groovings and furrows upon the ledge of soft sandstone in the Bay of Fundy ?

And need *we* hesitate to ascribe the groovings, striations and indentations on the limestone at Scarlet and elsewhere, wherever the boulder-clay is removed, to the same agency ?

We must again recur to the circumstance so often before stated, that at the period of the boulder formation the Isle of Man was a cluster of islands, and that powerful currents in all probability swept through the channels between them ; that tide-ways would be formed parallel to the coast-line, and that the climate was, to judge by the fossils included in the drift, of a more Arctic character than it is at the present time. Is it very difficult to connect the phenomena of the grooved, striated and indented rocks with the action of shore-ice, ice-floes and icebergs ?

It appears to me highly probable that at the commencement of the boulder period there was a gradual sinking of this area : successively, therefore, the points of different degrees of elevation were brought within the influence of the sea, and exposed to the rake of the tides charged with masses of ice which had been floated off from the surrounding shores, and bearing in their under surfaces mud, gravel and fragments of hard rock. If the basest-edge of a rock were opposed to the drifting currents, it is probable that their effect would be to detach pieces from it, or to break up the beds, especially when they consisted of alternations of soft shale with limestone. Thus an accumulation of mud, with blocks of limestone and the boulders torn from the old red conglomerate, would be constantly taking place in the hollows, and the sea-bottom would gradually be filled up. If the rock

over which the ice-charged current flowed presented no serious obstacle, if it were for instance one of the limestone domes or bosses which are so numerous here,—then, instead of tearing the beds in pieces, the effect of a mass of loaded ice grounded upon it would be to polish, groove and scratch the surface; and though the general direction of these marks would be that of the great tide-ways, yet so long as the rock was subject to the extremes of high and low water (just as at the present time the Carrig boss is in the centre of Poolvash Bay), we can readily conceive how the ice-charged breakers might produce scratches in any direction. Afterwards, as the submergence of the land proceeded, and these bosses became placed at greater depths below the sea-level, they would be beyond the reach of the merely scratching influence of shore-ice, but still suffer from the digs and thumps of icebergs, and by such blows would the indentations and those furrows, which, from being very deep and rough, gradually die out, be produced.

In the separate detail of these operations we may very possibly have erred; in the opinion of some, there may have been no *depression* of land, but on the contrary, *elevation*; or the *polished furrows* may be attributed to *icebergs* and the *indentations* to *shore-ice*; but the general theory which seeks for the solution of these phænomena in the action of ice, in some shape or other, floating in marine currents, does certainly not tax our credulity to any unreasonable extent.

Having spoken of the manner in which the sea-bottom was being filled up in the glacial period, it is easily understood how these furrowed and scratched bosses also became ultimately covered up with the accumulated glacial deposits, and how these marks have been preserved from erosion at a subsequent time, when this area was again



upheaved. The foreign rocks of the boulder period are plainly the produce of erratic bergs detached from more distant shores.

About sixty or seventy yards to the north of the limekilns is the boulder of porphyritic greenstone, to which allusion has before been made as having probably been detached from the mass of similar rock at the northern extremity of Langness, and drifted across Castletown-bay. The scratches and groovings on the surface of the rock at the limekilns point directly to that same spot on Langness. But as it may be argued that the current was as likely to have flowed from the magnetic west as from the east, it is desirable to state that there is no distinct trace in the boulder-clay at the limekilns of the rocks which lie to the westward of that point, viz. the trap—tuff and breccia which extend from the Stack of Scarlet to Poolvash Bay, and over which the drifting current would have passed had it come from the westward. It is at any rate a singular circumstance that we do *not* meet with these rocks, and it is not readily to be accounted for on the supposition that the currents of that period were solely due to the ebb and flow of the tide. At this very spot, however, we fall in with pebbles of *foreign* rocks in the boulder clay, which must have come from a great distance, from the shores of Cumberland and the south of Scotland; we have for instance fragments of the grit of the coal measures. Now all this leads to the conviction of one *great* current setting down from the Solway Frith upon these shores, and overpowering the effects of the local currents caused by the flux and reflux of the tide. The origin of such a current is at present a mere matter of speculation; we dare only point to the evidences of its existence.

On the hypothesis of a gradual depression of the land and sea-bottom, it is easy to see that as long as any par-

ticular surface was within the direct influence of the tide (lying, we will say, between high and low water), traces of that influence might be left on it, in scratches varying in direction from that of the prevailing great current, as indicated by the polished furrows and groovings; yet afterwards, as the submergence proceeded, and the surface of rock was placed at some depth below the level of the sea, all the detrital matter, the accumulation of the boulder clay deposited on it, would be the product of the great current only, and this appears to have flowed from the magnetic east.

## CHAPTER X.

The trap rocks of Scarlet.—Evidences of successive volcanic eruptions.—Great thickness of trappean beds.—Fossils of the trap-tuff.—The Posidonian schist interposed in it.—Probable extent and duration of the black marble quarries.—The economy of their working.—The Poolvash limestone.—Great abundance in it of the fossils of the Lower Scar limestone of Yorkshire.—Pleistocene beds at Strandhall.—Singular stalactitic concretions.

If the hieroglyphics which we have just been endeavouring to decipher at the limekilns remind us that there has been a period when the great agent employed in giving its physical contour and character to this area was ice, we have a chapter which has been stereotyped in a frame of molten rocks hard by at the Stack of Scarlet, which declares that the intensity of volcanic fire has also been exerted on the same object.

The undulations which we have noticed as increasing in number and intensity towards this point are suddenly intercepted by a series of igneous trappean rocks of every character and description, from a light pumice and volcanic ash to solid columnar basalt.

First of all we fall in with a compact trap-dyke of five feet in width running nearly north and south magnetic and intersecting the limestone; thirty yards further to the westward is another large dyke, or assemblage of dykes, running N. 30° W., and the limestone appears thrown down violently towards it, and masses of it are entangled in the trap and metamorphosed. Proceeding eleven yards further to westward we come upon a mass of amyg-

daloid, and this abuts against an isolated patch of altered limestone which has been raised into a dome or boss rather more than thirty yards across; round this boss and enveloping it like the coats of an onion are beds of *trap-tuff* or *volcanic ash*, and upon these a mass of *trap-breccia*. All these beds appear to have been broken up by the protrusion of the basaltic mass terminated in the Stack, and it would seem as if through the openings thus caused in the earth's crust another accumulation of trappean mud or ash had been poured forth which rests across the upturned edges of the previously erupted beds. We may perhaps sometimes have seen a thick coat of ice on the surface of a canal broken up by the passage of a boat and piled in masses on either side, and then frozen in a second time, so that the fragments of the first freezing stood bristling up edgeways at every conceivable angle and presented fantastic groups of miniature sierras. Now something of a similar picture is set before us in these trappean beds at Scarlet Stack. The scenery is extremely wild and picturesque, though the scale is so limited in its extent; a miniature volcanic mountain with traces of separate convulsions and outpourings of volcanic products. But the volcano was subaqueous which afforded the materials accumulated here, or at any rate it was so near the sea that the mass of ashes and scoriæ which were ejected fell at once into the waters, were borne along by the currents, and deposited in regular layers of stratification over the sea-bottom.

I have never been able to make out with certainty where the volcanic vent was that emitted the trappean materials first deposited, though I have conjectured that it was a prolonged chasm extending from the Stack of Scarlet into Poolvash Bay. We have but a mere strip of these rocks along the shore between high and low water to judge by, and the whole country has suffered so much from denudation that

we cannot always be certain where the denser masses have originally been. That there was afterwards a great convulsion along an axis in this direction is very evident, and also that it was this which originated the more violent contortions of the strata and was connected with the formation of the basaltic pile of the Stack; and that still subsequently there was an outpouring of similar volcanic matter to that at first accumulated in this basin, but enveloping altered fragments of the former eruption as well as of carboniferous limestone by which a species of breccia was formed; this is all pretty plain as to the general statement, but it is not always so easy to determine of two contiguous masses of the trappean formation to which of these periods they belong. It appears also most probable, that at the period of the great convulsion just alluded to there was so much heat evolved (perhaps with acid gases) as to alter considerably the character of the adjacent rocks. The metamorphosis is so complete in some instances as to render it difficult at first sight to determine of a piece of rock whether it is altered limestone or true trap. Such a result may arise from the circumstance which will presently be more particularly noticed, that at the period of the deposit of the volcanic ash at the bottom of the sea the ordinary calcareous deposit was also proceeding, and the resulting beds were a mixture of trappean with carbonaceous matter. Such a rock altered in various degrees must necessarily present appearances of a passage from true limestone into true trap.

The view from the summit of the Stack of Scarlet is very striking. We are standing on a pile of basaltic columns, not so magnificent or distinct certainly as those of the Giant's Causeway in the north of Ireland, but exhibiting the same characteristics; the sail-clad sea is spread almost entirely around, and at high water completely isolates the



*Castletown: from the Stack of Scarlet.*



mass. To the extreme west the Calf of Man with the Burrough and the Eye rock stretch far down into the Irish Sea, appearing from this point as it did from Langness, simply a prolongation of the Mull Hills. The bold front of Spanish Head rears itself aloft, and casts its black shadow athwart the waters of Poolvash Bay; then the precipitous Head of Brada to the north of Port Erin, from which (with the exception of the deep chasm in which lies Fleshwick Bay) we have a continuation of the insular chain to the north-east, including the more elevated points of Irey-na-Lhaa and South Barrule. The northern mountains of the island as seen from this point appear well clustered together, and form a fine background to Castletown and its bay, at the head of which the college facing in this direction is seen to great advantage. Sweeping round to the east, Derbyhaven with its white-washed cottages and herring-house, then the fort and ruined oratory on St. Michael's Isle, come into view, and quite round to the south-east we have the round tower on Langness.

The contortions of the limestone at Scarlet are well seen hence\*; the smooth surface of the beds, and their step-like face where opposed to the denuding action of the sea, are finely contrasted with the rugged character of the trap rocks, and the isolated mass of the crystalline altered limestone nearer to us. The very violent contortion of an apparently detached portion of the dark limestone enveloped in the trap-tuff, and jammed up against the outburst of basalt which terminates in the Stack, is particularly interesting, and catches the eye from this point when the rocks are laid bare at low water.

The fault before mentioned running N. 35° W. magnetic enables us to determine pretty nearly the thickness of the lower limestone series in this part of the basin.

\* See the view, "Castletown from the Stack of Scarlet."



I have measured accurately the thickness of this limestone from low water mark, spring tides, to the black shaly bed which appears just to underlie the Poolvash limestone, and this amounts to 129 feet. I cannot add more than 50 feet from the low water mark to the base of the limestone series, as the old red conglomerate at the south-western end of Langness runs out into Castletown Bay a great distance and at a low angle; so that we may put down in round numbers 180 feet for the dark limestones and shales at the Stack of Scarlet.

The upper portion of the isolated and altered patch of limestone nearest the Stack appears by the included fossils, as far as they can be made out, to belong to the light-coloured Poolvash limestone, but the lower portion may readily be observed as being the same with the black beds to the northward of the protruded amygdaloid and trap which have isolated this limestone boss. It is very unfortunate that at this point (where, in consequence of the removal of the drift-gravel and boulder clay, we have a distinct view of the order of superposition in the limestone series) the rocks should have been so much altered from their ordinary character. It is the more unfortunate because the junction between the upper and lower series of limestones in this basin is everywhere covered up by the tertiary formations; or wherever along this line of fault, running from Scarlet to Strandhall in the north-west of Poolvash Bay, they are brought up to view, they are both metamorphosed in such a manner as to render it somewhat difficult to determine whether the passage from one to the other was gradual or sudden. Such evidence as we have is in favour of the latter supposition. It is very plain that some decided change took place in the character of the sea-bottom of that period, either in consequence of gradual filling up, or, as seems equally probable, by volcanic elevation, which ren-

dered it a fit area for the development of organized life to a greater extent and of a more diversified character than hitherto. To be fully convinced of this fact, let us just before parting with them observe carefully the fossils of the upper portion of the lower dark limestone group.

There is a great dearth of fossils here, and the few which we find are of large species:—viz. *Caninia gigantea* of Michelin\*, *Orthoceras giganteus*, *Nautilus complanatus* and *Goniatites Henslowii*; the two latter were named originally from specimens found at this spot which are now in the Woodwardian Museum at Cambridge and are almost unique†. The Brachiopodous Mollusks are extremely rare. We shall find the reverse to be the case when we get into the Poolvash limestone series. Let us start thither.

The summary which we must give of appearances at the Stack of Scarlet is, that there were certainly two eruptions or disturbances; the one producing cracks and faults running about S. 35° E. and N. 35° W. magnetic, with others at right angles to this direction; another producing cracks and faults running S. 15° E. and N. 15° W., with others at right angles to this direction. The latter was probably contemporary with the trap-dykes which intersect this area.

As we pass along the shore the great thickness of the trappean deposit seems to come out in a more striking manner, and presents scenery quite peculiar to itself, whose wildness and desolateness, though on so small a scale, it is impossible to realize from mere description. This is particularly the case at a spot familiarly known by the name of Cromwell's Walk, where the action of the sea, aided by the peculiar condition of these beds, which have a tendency

\* I am indebted for this identification to Count Keyserling.

† There is also a large fucoid or perhaps zoophyte (*Calamopora inflata*?) which is distributed very extensively over two of the beds.

to split up into rhomboidal masses, has wrought deep chasms, which after all do not discover the base of the formation\*. It is however very interesting to mark the regularity of stratification in this trap-tuff or trappean ash, and the evidences it presents of a quiet deposit of the ash along with the ordinary carboniferous limestone of this area. We begin to see this first in a deep gully 100 yards north-westward of Cromwell's Walk, where there is a thin bluish-coloured bed low down in the tuff, which appears in every respect like a mixture of limestone and trap. If we follow the rise of this bed towards the north-west, we come to another denuded recess just under the stone shed which has been built on a prominent point of the tuff. In this we have, rising on a boss, a thick bed of black schistose limestone which is completely enveloped in the trappean beds and *appears* to dip under them in all directions; but as the boss is much broken and disturbed, we cannot be *quite* certain of this latter statement, more particularly as there is another bed of similar limestone I believe higher up in the series, as well as a thin band of the same rock, consisting mostly of black cherty nodules of a still more recent date.

My opinion at present is, that this black schistose limestone, which here appears low down in the trap-tuff, is the same as the Posidonian schist of Poolvash, though, from the circumstance of there being, as it would seem, three beds of this black limestone and the whole district much disturbed, it is hardly right to speak confidently. Amongst the disturbed trappean beds for instance, close upon the Stack of Scarlet, there is a contorted fragment of black schistose limestone, but it is quite impossible to fix the bed to which it belongs.

With some little trouble a small dyke may be made out intersecting all these trappean beds between high and low

\* It is at this point certainly not less than 50 feet thick.

water, and its protrusion seems to have contorted the neighbouring beds ; it runs hence N.  $46^{\circ}$  W. in a line for the Carrig rock in Port St. Mary Bay, and is probably the same as that which appears in the schist at the mouth of the Colby river near Kentraugh.

The trappean beds present a very singular brecciated appearance at a point where the shore begins to take a more northerly direction. It is a species of conglomerate rock, of which the inclosed boulders seem to be altered limestone. Here also we find masses of the black schist enveloped in the trappean beds and quite cherty.

Along the high water mark the strata have been much dislocated, and there is evidently the continuation of the line of fault from the Stack of Scarlet. But between high and low water the beds are very regular, and dip at a low angle in a direction for Port St. Mary N.  $56^{\circ}$  W. magnetic.

On the shore near the pile of stones erected by the Trigonometrical Survey, we have rather a large development of the trappean limestone beds, in which sometimes the trappean ash is the prevailing ingredient, at others the carbonate of lime. But the most interesting circumstance is, that we meet with organic remains regularly imbedded not only in the limestone, but in the trappean ash ; they are chiefly corals and crinoidea, and are the newest of the palæozoic fossils occurring on the Isle of Man ; they are rather abundant than otherwise, though the eye does not readily catch the particular beds in which they occur.

It is very readily seen that the black schistose beds are lenticular, and that the black mud of which they are composed was deposited in hollows and a shallow sea ; indeed, from the manner in which the great Posidonian schist bed at Poolvash, which is wrought as a marble quarry, thins out round the bosses of limestone which appear just at high water mark, it seems probable that the configuration of the

sea-shore in this immediate locality was the same at that particular period as it is now.

There is a ruined workshop of the marble-cutters at a point where the shore turns northward to form the inlet which is generally called 'par excellence' *Poolvash*\*, and it is here that the great black schistose limestone bed rapidly attains, as it dips into the sea, a thickness which has not yet been pierced, though at the back of the building a few yards to the south we find it only a foot thick, and seeming to die out amongst the trappean beds inland. It is an important point for the geologist to observe and to trace the continuity of this thin bed, having the trap-tuff below and above it, as it is the only evidence we have of the reality of the interpolation of the great Posidonian schist bed in the trappean formation. The circumstance of our observing all along the coast of this bay the black schist reposing at once on the limestone †, would lead at first to the belief that the passage from the one to the other was direct and uninterrupted. But a happy denudation of the beds near this workmen's shed shows, that after some disturbance of the limestone the trap-tuff was deposited in hollows and bays which it filled up, and that then the mud of the Posidonian schist was thrown down so as to overlap the line of junction of the trap-tuff and limestone and thus overspread both formations. Perhaps a closer examination may show, that just before the deposit of the Posidonian schist there was a second slight disturbance of the sea-bottom, and hence the rapid thickening to seaward of this bed.

In consequence of the extensive denudation which has taken place over this area, it is impossible to determine the thickness of the accumulating trap-tuff superior to the great Posidonian schist bed. As measured near Scarlet Head it

\* *The bay of death*, from the Manx *Poyll*, a pool, and *Baase*, death.

† See section to ground plan in Plate V.

was certainly not less in that locality than 60 feet, and it includes, as we have noticed, other beds of black cherty limestone and trappeo-limestone beds, and beds containing organic remains. There are also overspreading masses of a trap-breccia which contains lumps of the altered subjacent rocks, and there are trap-dykes intersecting all these beds which probably overflowed their surface and added to their thickness, though we have no distinct evidence of the passage of these dykes into overlying trap, so far as I have hitherto observed them.

This immediate locality is much intersected with these trap-dykes, to the protrusion of which I attribute the great contortions and the mammillated appearance of the beds of Posidonian schist\*. There is a small dyke, one foot wide, close under the marble-mason's ruined workshop just mentioned; to the northward of that a few yards, another 6 feet wide; and thirty yards still further north, one of 21 feet in width. The *general* direction of these is about N. 15° W. and S. 15° E. I presume that these are a continuation of the dykes observed at the Stack of Scarlet disappearing under the drift in this direction. Again, at the mouth of the stream from Balladoole, where the surface of the Posidonian schist is remarkably studded with bosses, we have a dyke which seems first to run hence N. 15° W. magnetic for some little distance, and then turns N. 35° W., and is probably the most southerly of the three which we meet with in the little creek opposite to which the road from Balladoole comes out upon the shore. I conjecture this to be a branch of the great Knockrushen dyke, and thus a continuation of the more southerly of the two notable dykes which intersect Langness†.

The Posidonian schist is so important a bed in an economical point of view, that I have dwelt rather largely upon it, in order that its true character and probable extent may

\* See Plate V.

† See Plate II.

be known. Since the days when Bishop Wilson caused to be quarried here the steps of St. Paul's Cathedral in London, a great inroad has been made upon the workable portion of it. The great depth at which it is in some places buried under the trap-tuff, the contortion and cracking which it has experienced in others, and its alteration for some feet where in contact with the trap-dykes; again, its thinning out inland, and the circumstance of the thicker beds only lying below high water mark,—all combine to make the exhaustion of the quarry as a remunerative investment a very possible thing, though very many years must elapse at the present rate of working ere this can take place. From the facility with which it is wrought into chimney-pieces, tomb-stones, steps, &c., it is evident that if it were better known in England a large demand would probably arise. It does not however take a natural polish in consequence of its soft character. A kind of black varnish is put upon the objects which are wrought out of it, and in this way they are made to look not much inferior to the best Derbyshire black marble.

The labours of the quarriers in getting at this black marble have shown us another locality in which the groovings and striations of the glacial period may be well examined.

At the point where the more northerly of the two largest trap-dykes just noticed disappears under the drift and boulder series, a large portion of the latter has been removed, and on the surface of the Posidonian schist thus laid bare the glacial marks are very finely developed, with their bearings corresponding to those which we have observed at the limekilns near Scarlet Stack.

The different layers (or *lifts*, as the quarriers call them) of the Posidonian schist bed vary both in their lithological texture and in organic contents. The finest and most compact layer, which is worked for ornamental purposes, is

characterized by an abundance of the *Posidonia* and the relics of tree-ferns, which we must necessarily regard with interest as indicating an approach, though still at a considerable distance, towards the coal formation of Great Britain. Another layer is little better than a soft shale charged largely with sulphuret of iron, and in this we have preserved (converted into that sulphuret) the remains chiefly of cephalopods, *Goniatites* and *Orthocera*. There is a gentle rill in the eastern corner of this little creek which bursts out from under the drift-gravel near one of the trap-dykes, and the cattle coming down to drink there, trample about in this shale bed and break it up, and the tides then wash out the fossils and cast them ashore. In consequence of their metallic lustre and electrotypic appearance, they have been much sought after by those who are acquainted with the locality, and have become rather scarce. It may be well to note, that all the beds of the Posidonian schist are more or less charged with iron pyrites.

Continuing our sea-side ramble north-westward, we meet with a succession of creeks in which we find the hollows occupied by thin beds of the Posidonian schist, but the ridges are composed of a pale grey limestone almost entirely made up of fossils. These belong to the upper limestone series, which from the locality I have termed the Poolvash limestone. The colour seems owing almost entirely to the abundance of the organisms contained in the rock, and throughout the entire mass no trace of a shale bed appears.

The manner in which this patch of the newest limestone in the very centre of the basin has been preserved and exhibited to our view, is somewhat singular.

The original deposition of the beds of this Poolvash limestone seems to have been in a wide but not very deep bay, in which a line drawn from Spanish Head to Kirk



Santon Head would perhaps unite the extreme horns, though, in consequence of the denudation of the tilted edges both on the east and west side, we have no data by which to establish this satisfactorily.

When the whole of this area was broken up by the convulsion which originated the trap-dykes undulations and bosses, the hill above Balladoole near Poolvash seems to have been elevated somewhat more than the neighbouring portion in a dome shape, and in the elevation it cracked along its south-western and north-western sides. Thus, when the denuding action subsequently took place, which we have always presumed to have come from the north-east and round towards the south, in consequence of their dip towards that quarter, the Poolvash beds on the Balladoole side were preserved.

We may perhaps illustrate the changes which have passed over this southern area since the Old Red Sandstone or Devonian period in the following manner.

Suppose a freshwater lough fed by a large river, but just accessible to the sea at about the ordinary half-tides. A hard frost sets on at the time of high water of the highest spring tide, and coats the lough with ice; on the ebb of the tide the water falls a few feet, and the ice sinks down upon the sides of the lough. In this condition a second coat of ice is formed at the ordinary level of the lough, and the first icy coating sticks up on all sides around it. When the tide flows again, the incoming waters force up the ice in the centre of the lough, and through the cracks thus formed the salt water gushes up, and forming a mixture with the fresh water of the river, overflows the broken beds of the first and second freezing; but as the tide this time does not rise so high as before, supposing another coat of ice now formed of this mixture of salt and fresh water, though it will overspread all the ice of the second freezing

and partially of the first, it will still leave a portion of the first freezing sticking up around its edges. A fourth sheet of freshwater ice is again formed on the recess of the tide, which is again contorted and broken up at the next high water, when another and fifth crust is frozen of mixed salt and fresh-water, the proportions of each, as in the third freezing, varying according to the distance of any particular locality from the mouth of the lough. The tide ebbs and flows again, but this last time, in consequence of a violent storm producing a heavy ground-swell upon the sea, the force of the incoming tide is such as to produce great undulations and domes in the centre of the lough. A thaw commences in the interior of the country, and the augmented volume of the river consequent upon it sweeps along over the surface of the lough and erodes the beds, which being tilted up are more directly opposed to its violence, whilst those which present a smooth surface to the current are preserved. At the same time the hollows are filled up with gravel and detritus brought down from the uplands on the melting of the snow and the overflow of the river upon its banks.

In the above illustration, the first freezing will represent the older lowest dark limestone of Ronaldsway and Port St. Mary; the second is the Poolvash limestone; the third the lower trap-tuff; the fourth the Posidonian schist bed; the fifth is the upper trap-tuff; and the alluvial deposit after the denudation may represent the position of the boulder formation and drift-gravel series overlying the undulating and broken beds in the lower portion of this southern area of the Isle of Man.

The crack which we have just noticed as occurring on the south-west side of the Balladoole hill is best seen at a point where the sea-road suddenly descends to the shore after passing a small cluster of cottages four hundred yards west-

ward of the road to Balladoole. The lift seems to have been sufficient to bring up the black beds of the lower limestone to view.

At this point between high and low water there is a spring which seems to communicate with an underground pool, filled from the sea at high water, and which continues to run as a salt stream several hours after the ebb of the tide\*.

The whole of the coast hence to Strandhall is so cut up with dykes and metamorphosed, that it is impossible to make out any order in the beds, though it is generally evident that in proceeding north-westward, we are descending again into the lower series†.

The very great alteration which has taken place in the limestone here would seem to indicate that this was the grand focus of disturbance at the period of the trap-dykes, and this is further confirmed by the circumstance that the majority of the dykes which stretch over the area seem to converge towards this locality as a centre.

I had the great gratification of submitting a portion of this altered limestone to that eminent continental geologist Baron Leopold Von Buch, and after a very little examination, he pronounced it pure dolomite. A chemical analysis also of the same rock, by my valued friend George Kemp, Esq., M.D., determined its magnesian character. The establishing this species of metamorphism in connexion with trap-rock is highly interesting and important‡.

\* This is the best locality for obtaining a series of the Poolvash fossils. They are so abundant as really to make up the substance of the rock. Within an area of 100 yards, almost every species noted in the Scar limestone of Yorkshire may be found.

† If the trap-tuff and Posidonian schist extended thus far (which is highly probable), they have been entirely denuded.

‡ Geologists seem to have been misled many years ago, when their science was in its infancy (a mere branch of mineralogy), by

When we reach Strandhall, the limestone has recovered its ordinary character, and the lower beds are exhibited between high and low water nearly horizontal, and charged abundantly with its characteristic fossils.

There is an interesting phenomenon connected with the tertiary sands, which, as we have the opportunity, we may as well study at this point, though the same is developed on a much grander scale in the north of the island.

As might be naturally anticipated, many of the springs of this neighbourhood, passing through and over the beds of limestone or washing the boulder clay, are highly charged with carbonate of lime. A spring of this character bursting forth from under the drift-gravel near some cottages on the sea-shore at the mouth of the Strandhall streamlet, has cemented the pleistocene sands of this locality in a very singular manner, forming hard, sonorous, stalactitic-looking masses. These are often tabular, and pierced with a series of long tubes varying in bore from that of a straw to two or even three inches diameter. At other times they are like long tapering icicles with a stone attached to the thicker end. It would seem that the water forcing its way through the pleistocene sands interposed between two layers of loam, and carrying with it particles of the carbonaceous clay thence derived, has a tendency to form concretionary masses on the lee side of any obstacle, (as for instance a pebble bedded in the sand,) and pipes or cavities where it has a freer course. The fragments of shells in the sand assist towards this concretionary structure, and perhaps it is owing to their great abundance that in the north of the

specimens of rock taken from this neighbourhood. Some early geological maps which I have seen, lay down a broad band of the magnesian limestone formation enveloping palæozoic formations in the Isle of Man. There is dolomite indeed, but it is metamorphic limestone of the carboniferous æra.

island, though the actual quantity of lime in the boulder clay is hardly more than six per cent., we have large masses formed in every gully after excessive rains by the percolation of the waters through the alternating beds of sand and loam.

At Strandhall we have also a modern raised beach, cemented by the carbonated water, and a lovely bed of moss of some extent is being converted into travertine by the same cause. We can easily select specimens whose upper portion is all alive, green and flourishing, whilst the lower is fixed and rigid in its coating of stone, which preserves for ever the delicate outline of the growth of other days.

## CHAPTER XI.

Strandhall.—Submerged forest.—Has the land gone down or the sea come up?—The great fault.—Denudations.—Kentraugh.—The Giants' Quoiting-stones.—The Runic Cross.—Port St. Mary.—Perwick Bay.—Coast scenery.—Spaloret and the Chasms.—The Samphire-gatherers.—Spanish Head.—Rumpy cats.—The Calf Islet and Cow Harbour.—The city of the Conies.—Bushe's house.—Boss of gravel in the Calf of Man.—Icebergs again.—Diluvium.—The legend of Kitter and the sword Macbuin.

WE are once more on the high road, and two miles to the eastward along it would return us to Castletown, though our walk thence along the shore has been double that in distance, and, not including stoppages, the treble of it in point of time. But we are bound for Port Erin and Fleshwick Bay, Port St. Mary, the Chasms, and the Calf Islet. Our ungeological friends have promised to pick us up at this point as they pass by in their carriage, but we are decided on first of all making them alight awhile, and examine with us the ruins of a submerged forest.

At the mouth of the Strandhall brook, between high and low water, may be observed a bed of turf about one foot thick, and the trunks of trees (chiefly ash and fir) standing upright, and their roots running down into an alluvial blue sandy marl; these roots may be traced several feet, and it is perfectly plain that here on this very spot the trees lived and grew. The same thing (viz. the existence at one time of forest trees at a level now below high water) is also established for other localities around this great bay. Twenty-one years ago, according to the testimony which I have received from living witnesses, after a

violent storm of three days, the sands opposite Mount Gawne were swept away and discovered a vast number of trunks of trees, some standing upright, others laid prostrate towards the north, as if overthrown by some violent incursion of the sea\*. Nay, it has been further stated to me by those whom I am bound to believe, that the foundations of a primitive hut were laid bare, and that therein were some antique uncouth-looking instruments, once the property, it may be, of the primitive woodcutters†. Now we need not be told that the oak, ash and fir are not marine plants, and that turf and algæ do not ordinarily occupy together the same soil; and yet the algæ wave and float around and upon these venerable stumps, as if they were veritably the mere metamorphosed mosses and lichens which in more ancient days fastened and luxuriated upon them. To what do these things tend? The land has either gone down, or the sea come up. The latter supposition no geologist will subscribe to, as it has now become an axiom that nothing is so stable as the sea, and nothing so unstable as the land. The land has gone down then, and carried the turf and the trees along with it. But I further believe that it has partly come up again. My reasons are the following.

I have already alluded in several instances to a raised sea-beach, of apparently a modern date, occurring very distinctly along the coasts of the southern part of the island, at a level of about eight feet above the present high

\* One gentleman (the father of my informant), hoping to turn the strange occurrence to some account, carted away several loads of the rotten turf which was laid bare and spread it upon his lands. The effect was just the opposite to his intention: the fields were barren for two or three years.

† The marks of a hatchet are discernible on one of the stumps which I have removed.

water. In many instances the coast-road runs upon this beach, and the former beach (generally a bank of the boulder clay or drift-gravel) rises up on the landward side at distances varying, according to the fall of the ground, from twenty to fifty yards from the present high water mark. The road in fact runs between two coast lines, the present and a more ancient one. Perhaps the two most clear examples are, the road from Hango Hill to Castletown, and the road at the foot of Mount Gawne, between the mouth of the Colby river at Kentraugh and the streamlet which comes down from the meadows of Kirk Christ's Rushen. I have just alluded to the cementing of the materials of this newest beach by the calcareous spring hard by here at Strandhall. My own feeling then is, that this last-raised beach has been formed since the growth and perishing of the half-merged forest. First appearances perhaps go the other way, and it seems easier to suppose, that when the land was elevated so as to form this beach, the elevation was to such an extent as to leave dry a large portion, if not the whole, of Poolvash Bay, and that on the land thus gained from the sea the forest grew, and that there has been since that time a gradual sinking of the land, by which the sea has regained its territory nearly up to the ancient beach of the drift-gravel, and that thus the trees have been submerged.

But let us examine the matter a little more closely. We may first then observe, that the localities where the trees are found are at the mouths of low valleys opening out widely into the sea; and, as I have previously stated, they seem to have been formed by the denuding action of the sea during the elevation of the great drift-gravel platform, and are contemporary with the scooping-out of the great basin of the Curragh in the north of the island. Now that elevation being to such an extent as to connect the island



with the surrounding countries, these excavated valleys would be far more extensive than now, and their termini would be removed many miles from the points where they now meet the salt water. These were the valleys and plains in which the great Elk (*Megaceros Hibernicus*) delighted, and in them, in the south of the island as well as in St. John's Vale and the Curragh of the north, his remains are found. And as in the present day these low alluvial and sheltered valleys are almost the only localities where timber seems readily to grow, so would it be then.

But a period of submergence came: the sea again over-spread the valleys and converted them into estuaries, whilst the great drift-gravel platform was being quietly still further eaten away, and then the turf-beds and the forest-trees became the habitat of marine monsters:

“Piscium et summâ genus hæsit ulmo\*.”

The inner coast line was then formed. But a gradual emergence again set on, and may still imperceptibly be going forward, which has brought up to our inspection out of the great brine-vat the preserved samples of a primitive vegetation, which have been in pickle for (it may be) thousands of generations.

In our onward journey by the high road we must again ask our friends to halt and alight for ten minutes, whilst we examine the fault which cuts off suddenly the limestone in the western area of this southern basin. It is rather better than half a mile westward of the Strandhall streamlet, and not more than 300 yards beyond the lime-kiln by the road-side, and about the same distance from the eastern lodge of Kentraugh. Here it is! clear enough on the sea-shore, where a short road, convenient for carting the wrecked sea-weed, leads down from the highway.

\* Horace, Od. i. 2.

We are looking nearly westward\*, in a line which passes through the limekilns at Port St. Mary, and grazes the bluff coast extending thence by Spanish Head and the southern side of the Calf of Man down to the Burrough and the Eye rock. On our left hand is the lower dark limestone, nearly horizontal; on our right the schist, dipping generally at a very low angle towards the south, but with gentle undulations as we proceed in a westerly direction. We stand on broken ground covered with boulders and shingle, but with some slight indications that along the line of fault the same mass of greenstone runs which is discernible at Port St. Mary. Where is the Old Red conglomerate? I have little doubt that it underlies the limestone here up to the very edge of the fault, and of a respectable thickness too, for such is the case a few miles inland up the country, as seen by the cross-fault at Athol-bridge on the Peel-road from Castle-town†. But it is plain enough that after the elevation of the entire country on the northern‡ side of a line drawn from Athol-bridge through this spot to Port St. Mary, a great denuding force has clean shaved off the upper and lower limestone, the old red conglomerate and some portion of the schist beds; and so here, as well as at the fault at Coshnahawin (which was noticed before), the limestone and the schist are in such juxtaposition that the fact of the intervening old red conglomerate is not at all exhibited.

Let us take a note of the period within which this fault occurred, for it may be of use hereafter. The boulder clay lies directly and unbroken across the great fracture; it was therefore anterior to that deposit; and though the newer limestone beds do not reach up to this line of disturbance now, it is very clear that this is only in consequence of the

\* Magnetic S. 80° W.

† See Plate II.

‡ Magnetic meridian.

denudation, which has swept away rocks on both sides of it; the fault was therefore posterior to the Carboniferous *æra*. We have thus, even geologically speaking, a vast interval wherein the different elements of elevation and destruction had their play.

The drive along the coast by Kentraugh from this point is particularly fine, and the country around in a high state of cultivation. There are unmistakeable evidences too of a desire on the part of the great landed proprietor of this neighbourhood to develop the agricultural resources of the country, and to advance the character and condition of the farm labourers. If a similar desire were more general, the complaint which has been sometimes made by English judges at agricultural meetings on the island, that it would be desirable to grow more wheat and fewer weeds, would soon be groundless.

Just beyond the Colby river where it meets the sea near Kentraugh, there are three roads which rise from the shore inland upon the terrace of the drift-gravel. The first leads up to Ballagawne and Fleshwick Bay, the second to Port Erin, and the third to Port St. Mary; this last may perhaps be considered rather as a continuation of the main road, and we may as well adopt it, as most fitting to our present object.

A gigantic slab of clay-schist stands erect in a field on our right,—the monument, it may be, of “Danish chief in battle slain.” It once had its fellow, and tradition assigns their location to the energies of two giants, who in a trial of their respective skill in quoit-playing tossed them hither from the summit of the Mull Hills\*.

A few years ago there was another stone of some interest, as being the only Runic monument in this neighbourhood and the largest on the island, which stood at the meeting

\* Hence the name, “the Giants’ Quoiting-stones.”

of the road to Port Erin with the road running from Port St. Mary to Rushen parish church. It must now be inquired after, and will be found after some search propping the wall of a tottering outhouse in the farm-yard close by.

Port St. Mary, or as it was anciently called in Manx, Purt-noo-Moirey, and thence corrupted into Port-le-Murray, is a thriving fishing hamlet carrying on a fair export trade of limestone, lime, and agricultural produce at all times, and in the herring season sheltering a large portion of the fleet whilst pursuing their fishing on the southern coasts. The harbour was formerly not considered safe, but recent survey has shown that with a not excessive outlay very superior accommodation might be obtained for even large vessels in almost every wind\*. The Calf of Man may be visited by boat either from Port Erin or Port St. Mary, or we may proceed on foot or horseback over the Mull Hills by the sequestered hamlet of Craig Neesh to the Sound of the Calf or Kitterland Strait and take boat there, should there chance to be one on the spot. The direction of the wind and the state of the weather will best determine the route, or whether the Calf Islet should be attempted at all. The coast scenery is so fine in this neighbourhood that the journey by water should be adopted if practicable by those who have heart for it, and can enjoy azure depths, dark frowning precipices, rocky pinnacles, water-worn caves, and the wild screaming of thousands of sea-fowl echoed responsively from one bluff headland to another.

For the purpose of visiting the far-famed chasm of Spanish Head, let us take a boat from Port St. Mary. A

\* The Mariner's Guide notes the Carrick as a dangerous rock in the centre of Poolvash Bay. The material of which it is composed would pay for its removal. It is a fine boss of the lower limestone. Conchologists will find it a favourite habitat of *Saxicava rugosa*. With a hammer we may detach masses of rock thick with pear-shaped cavities and containing the living mollusk.

guide will conduct the more timid thither on foot by a somewhat tedious road which winds about on the eastern side of the mountain. We may, whilst the boat is being prepared, examine the limestone in the neighbourhood of the kilns and procure a series of the fossils of the lower beds. They are here rich in the larger corals, and good samples of *Favosites catetes* and *Turbinolia* may be picked up. The grooving and polishing of the limestone also just under the boulder clay near the limekilns may be well-studied, and turning round the point into Perwick Bay, a good section is exhibited of the boulder clay with the drift-gravel resting on it, and overlying the junction of the limestone with the schist caused by the fault which has just been noticed as continued hither from Athol Bridge through Strandhall. Perwick Bay itself has some very pretty scenery, and will be found well-worthy of a visit.

And now we're afloat and gliding down coastwise to the south-west on the ebb tide. A good mile brings us to Fistard Head, where, as Mr. Chaloner has noted in his book or rather map, is the rock called "Chering Cross where the rare grotto is." A huge bifurcated stack rises up amidst the breakers like twin gigantic sugar-loaves to a height of 150 feet\*. From the almost perfect horizontality of the beds of grey-coloured schist of which it is composed, it might readily be taken, even within a short distance, for a pile of limestone†. Flocks of gulls and curlews are perpetually disputing its prominent points, and many a good shot may the marksman here get at "Mother Carey's chickens‡." The "rare grotto" will amply repay the

\* See view of Spanish Head from the chasms.

† The light blue schist of Spanish Head breaks up into long slabs, which are used very largely on the island as lintels for doors and windows. It is slightly elastic and very tough in texture.

‡ *Thalassidroma pelagica*, or Stormy Petrel.

peril of the visit. At full tide it may be sailed through, and on a calm day no voyage can be more delicious. Below is the deep blue pool swarming with fish of every character; crabs, lobsters, sea-urchins, star-fish and medusæ (jelly-fish) with long floating and stinging arms present an ever-moving picture: above, the heavy-browed arches whose rude groinings have been carved out of the solid rock by that never-ceasing tool with which Old Ocean fashions his wondrous palaces, where the flickering light dances to and fro as the splash of the oar stirs the ripple doubled and tripled and interlacing with its fellows returned from each jutting point of this winding cavity.

Emerging again to the clear and steady light of day, we find ourselves at the foot of a stupendous precipice, frowning down upon us full 300 feet, rent into awful chasms, and presenting detached masses which imagination at once converts into the gathering strength of rocky avalanches, just about to rush down and overwhelm us in their stupendous ruin. And such events are not the mere pictures of the imagination, but a reality. Even within the last winter a pile of several tons weight precipitated itself from the summit of Spanish Head into the raging waves below, mingling its awful crash with the deep roar of the wintry billow. And the geologist will easily see that the nearly half-moon bay lying between Fistard Head and Spanish Head has been formed by a series of such catastrophes.

The dip of the beds is nearly magnetic south, at an angle, however, not exceeding  $15^{\circ}$ . An examination of the neighbourhood seems to indicate that they form part of a large dome, of which the Mull Hills are the summit. In the elevation of that dome cracks were most likely formed perpendicular to the surface and at right angles to each other, converging therefore towards the central nucleus. Whether the great fault which we have noticed

already two or three times as extending in this direction happened at the same time with that elevation, or was subsequent to it, is not a point of great importance in the question, or readily determined. The result in either case would be the same, viz. that of a steep precipice towards the south or nearly south, of which the upper part would be always impending, and the lower part would present to the beat of the waves great facilities for destruction, in consequence of the cracks and chasms running inland at right angles to the coast line. There is in fact a constant tendency to land-slips, and the erosive action of the sea upon the cliff is ever accelerating such events. Any convulsion of nature, and more especially a violent earthquake, would also produce similar catastrophes. There are dark allusions in some of the ancient chronicles to remarkable earthquakes felt on the island, and it is not altogether improbable that the fissures which now attract particular attention may have been thus enlarged from mere cracks to their present size within the historic period. Dr. M'Culloch has noticed the position of the ruins of a hermit's residence in reference to this point; and the situation of a cromlech on the very edge of the precipice, and intersected with fissures, indicates that the locality has experienced some disturbance at a date not very far back.

To get a good view of the phenomenon we must ascend to the summit of the precipice. By proceeding towards the western recess of the bay, where the shore slightly recedes, we may, after some toil, accomplish this. I have ascended by the cracks and crannies in the perpendicular face, but I should not be disposed to venture a second time. Having once upon a time proceeded half-way, the incoming tide and the oncoming night forbade a return, and forced me to adopt the system of climbing-boys, with elbows and knees against the opposite walls of one of the

narrower fissures. Right thankfully I placed my hands upon the topmost ledge of rock, and drew myself on to its secure platform. A story is current in the neighbourhood, which may well make us shudder in looking down from this fearful precipice upon the broken crags below us.

Two samphire-gatherers, husband and wife, had discovered a fine bed of that herb\* on a rocky ledge several fathoms below the great platform. In no place with which I am acquainted does it luxuriate more richly than in the clefts and crannies about Spanish Head. They determined to be possessed of this prized discovery; and for this purpose procured a rope, which the wife permitted to be passed under her arms, and in this manner, with an ample bag suspended from her neck, she was let down by the husband to the identical spot. When she had gathered as much as she could, she signaled to be drawn up.

It would appear that, in consequence of the additional weight, some of the strands of the rope were sprung, or, more probably, they had been chafed and severed against the keen edges of the rock. When within a few feet of the top the rope altogether gave way. Can we picture the agony of the husband in that moment, when he beheld his wife dashing headlong from pinnacle to pinnacle, till at length her mangled corpse was received in the rolling surge?

On examining the rocky platform we shall observe, about eighty yards inland from the brink of the precipice, a line of subsidence running magnetic east and west, and between this line and the cliff a series of parallel deep cracks or *crevasses*, some of them a good yard wide. At right angles to these *crevasses*, that is, in directions running magnetic north and south, we find the rock rent into several grand chasms penetrating to an unknown depth, though evidently narrowing as they proceed downward.

\* *Erithmum maritimum*.



The area of the most seriously disturbed mass, which seems ready to detach itself from the mountain-side and rush headlong on the slightest provocation into the sea, is by actual measurement about 12,000 square yards.

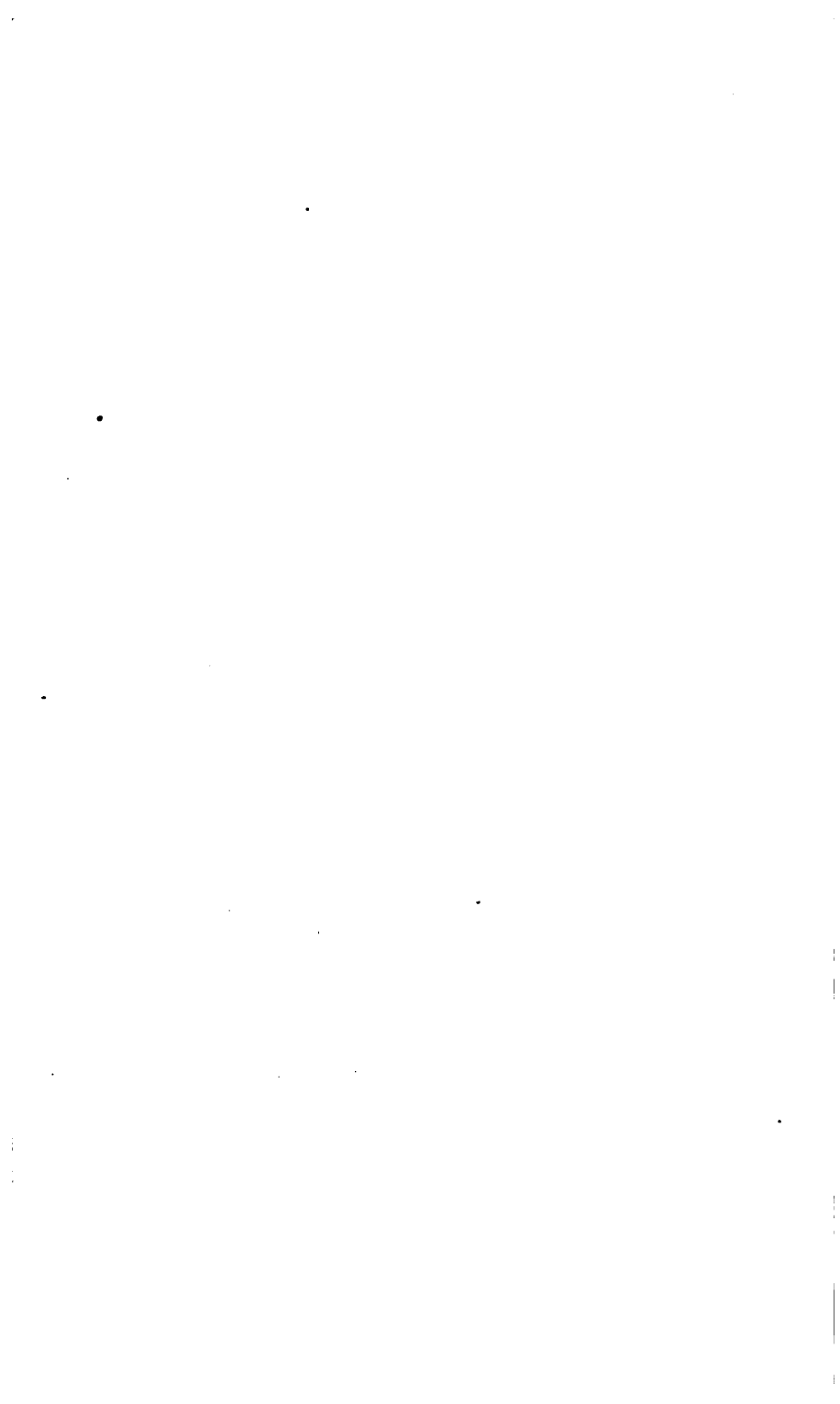
After betaking ourselves again to the boat, a little steady pulling will bring us in front of Spanish Head itself, the most southerly point of the island. 'T were hard to say whether the upward or the downward look is the most sickening. We are floating betwixt as it seems twin abysses, the ocean and the sky, the blue above and the blue below. A stupendous wall of grey schist rears itself on high, directly out of the sea, to an elevation of 300 feet; its reflection in the azure mirror before us doubles that height, and in truth the plumb-line will sink many fathoms even close in shore ere it strikes the bottom. Tradition is very strong which connects the name of the headland with the wreck of a portion of the Spanish Armada upon this iron-bound coast. Full many a noble vessel might founder here and leave no trace behind. I have however heard it hinted, that the island owes its singular breed of tailless cats\* to that event, and that the ancient cradle of this apparently mutilated species of the feline family must be looked for in one of the provinces of the south-western peninsula of Europe.

In turning the point of Spanish Head we find ourselves suddenly in the rake of the tide, which sets, when near the full, with great rapidity through the narrow channel separating the Calf Islet from the main island. In bois-

\* The Rumpy Cat (as it is here called) appears to be a monstrosity of the common domestic cat. In its wild state (which is not unfrequent) it is somewhat larger than an ordinary-sized cat; the hind legs also are proportionally larger than the fore. In mixed breeds, of which I have had frequent sight, of the same birth, some have been without tails, others with full-length tails, and others again with mere rudiments of tails, consisting of only a few joints.



*Spanish Head from the Charns.*



terous weather the passage from the one to the other is not without great risk, and though the width of the channel is not more than 500 yards, there have been occasions when for many days no communication could be made across. There are several sunken rocks, and the strait is often full of breakers. In mid-channel, though rather to the northern side of it, is a small islet called Kitterland, of about an acre and a half, on which the tide breaks in full fury and becomes divided into two powerful river-torrents, running from eight to ten miles per hour when the wind blows strong at high water from south-east or north-west.

The landing at the Calf Islet is usually made at a small creek on the northern shore, whence parties proceed by a winding road which rises over the hill on the western side to visit the ruins of Bushel's House and the adjacent light-houses. It will be as easy for us to run down on the south-eastern side of the islet, passing the fine headland Gough-yarn and a series of wild creeks, till we reach the Cow Harbour, an extremely convenient place of access near the Burrough at the south of the Calf of Man. Here then we may ship our oars, and draw up the frail craft "in littore sicco."

At the southern extremity of the Calf Islet is a fine patch of the drift-gravel platform. It is here about twenty-five feet above high water, resting upon the tilted edge of the clay schist, which dips at a high angle S. 30° W. magnetic\*. That feeble folk the conies have becaaverned it in every direction, and as their mining operations have been carried on now, according to most ancient records†, for many centuries, their subterranean city spreads out with

\* I discovered here a small vein of sulphuret of copper in 1846. It runs S. 60° E. magnetic, and dips S.W. by S. at an angle of 70°.

† Chaloner, writing in 1653 of the Calf Islet, says, "Here are some Ayries of mettled Faulcons, that build in the Rocks; great

its labyrinth of streets to an unknown extent. The tenant of this island farm, in remuneration for the damage which they occasion to his growing crops, demands from them about 2000 heads annually, the amount of which he remits to the "Lord of the Isle," in part payment of the rent.

Hard by, standing out somewhat prominently into the southern sea, are two remarkable rocks, the Burrough and the Eye, of which the last is perfectly insulated, and both rise to a height of more than a hundred feet above high water, and are pierced by natural archways wrought out by the action of the sea when at a higher relative level upon the strike of the schist of which they are composed. The Eye is accessible only with much risk and toil, and on its summit is a singular excavation called the Grave of Bushel\*, in reality a place of refuge, concealment and defence, perhaps at the time when, as Camden tells us, the islet was held by "a pretty good garrison." We ascend by an easy road, for which we are indebted to the Edinbro' Board, as the guardians of the northern lighthouses, who opened it

store of Conies, and Red-Deer; and in the summer time, there arrive out of Ireland and the Western parts of Scotland many of those small Hawks called Merlyns. There is also a sort of Sea-Fowl, called Puffins, of a very unctuous Constitution, which breed in the Coney holes. The flesh of these birds is nothing pleasant, fresh, because of their rank and Fish-like taste, but pickled or salted they may be ranked with Anchovies, Caviare, or the like. But profitable they are in their feathers and Oyl."—Description of the Isle of Man, p. 2.

\* Mr. Wood described it in 1811 in the following terms:—"It is in the form of a cross, each of the two longitudinal cavities being about six feet long, three wide and two deep. Immediately at the edge of the cavities is a wall of stone and mortar, two feet high, except at the southern, western and eastern ends, which were left open, perhaps for ingress, egress, observation, and the admission of light. The whole is covered with slate and mortar. Salt water is found at the bottom, the consequence of the sea breaking over the rock in stormy weather."

and keep it in good repair, to facilitate the transport of stores to the two important lighthouses, which are so placed on elevated ground in the western part of the Calf Islet as that their two lights being brought into one, shall bear upon a dangerous reef, the Hen and Chickens, running out a few hundred yards into the sea, of which the extreme point is dry at low water. How deeply interesting is it to ascend the spiral stairs of one of the towers, and to follow out the details of these beacons set upon a hill, upon the accuracy of which depends the safety of so many richly freighted vessels and the preservation of thousands of our hardy tars in the dark nights when "the stormy winds do blow!" And that solitary watcher, how deep the responsibility which devolves upon him to keep from sunset to sunrise the lights burning, the wicks well-trimmed, the mirrors bright and burnished, and the machinery clean and regular, and wound up at stated seasons!

To the northward of the lighthouses, on the highest point of the Calf Islet, full 470 feet above the sea, is a pile of stones, erected for the Trigonometrical Survey. A would-be hermit of the name of Bushel erected about two centuries ago a lonely hut within a few feet of this point, where the precipice descends with fearful rapidity into the sea\*. The following record which he has left of himself, whilst it contradicts the story of his death and burial on the islet, is a painful testimony to the reality of his seclusion and the motives to it†:—

"The embrions of my mines proving abortive by the sudden fall and death of my late friend the Chancellor

\* Quoted in a MS. history now in the possession of the Clerk of the Rolls, written about 1655, the author of which says he found it set down in Mr. Thomas Bushel's Mineral Overture to the Parliament.

† Looking down the precipice, within a few yards of the ruined hut into the sea, the eye rests on the two triangular or pyramidal

Bacon, in King James's reign, were the motives which persuaded my pensive retirement to a three years' unso- ciable solitude in the desolate island called the Calf of Man, where, in obedience to my dead Lord's philosophical advice, I resolved to make a perfect experiment upon myself, for the obtaining a long and healthy life (most necessary for such a repentance as my former debauchedness required), as by a parsimonious diet of herbs, oil, mustard and honey, with water sufficient, most like to that of our long-lived forefathers before the flood (as was conceived by that Lord), which I most strictly observed, as if obliged by a religious vow, till Divine Providence called me to more active life\*."

The attention of the geologist will, however, on this spot be arrested by a still more singular and far more ancient record of events which this islet has witnessed.

Scattered here and there round about the ruins of this hut are rounded lumps of granite and other hard rock (strangers to this islet) about the size of a medium cannon-ball. They were certainly not brought hither for Mr. Bushel's special amusement, nor is it very likely that he followed so closely in the steps of his master as to speculate on the fact of their occurrence in this singular locality; and yet their occurrence is well-worth the study of even the most profound philosopher. *Whence* did they come hither? *How* did they come? These are questions which involve in their answer some of the most interesting theories of geologists.

rocks of the Stack, fifteen yards from the bottom of the cliff, with the sea intervening, and rising from a base of about fifty feet to a height of rather more than one hundred. They form a very picturesque object as approached from the north-west.

\* Mr. Wood relates a tradition of a person who in the reign of Queen Elizabeth had murdered a most beautiful lady in a fit of jealousy, and took refuge in the desolateness and seclusion of this islet.—Wood's Account, p. 144.

Let us see what further facts of a similar character may be picked up on the islet. Strung together they may form a band capacious enough to encircle the truth, and bring it before us bound down within the limits of a reasonable probability.

We pass to the eastward over hill and dale, rugged and barren, and at every ten or dozen yards of our progress these rounded and scratched foreigners catch the eye. Sometimes they increase largely in their dimensions, and become, though not gigantic, yet full-sized boulders. Near the eastern Pile of Stones which has been erected on an eminence of 400 feet above the level of the sea is a very remarkable deposit of boulders, gravel and sand. It is about a hundred yards north of the pile, and at twenty-eight feet lower elevation, but still resting on and covering, in the shape of an oblong spheroidal boss, a somewhat raised portion of the clay schist which forms the substratum of the islet.

A good section has been made into the very heart of this mass (which is about thirteen feet deep and fifty feet across in the longer, *i. e.* the north and south axis) for the purpose of procuring gravel for the neighbouring road, and exhibits a somewhat irregular yet distinct stratification, which consists in the lowest part of a deposit of fine sand; above that, patches of gravel in sand; then still higher up, of gravel and scratched fragments of rock and good-sized boulders. And the rocks are not any of them such as we could swear to as belonging to this immediate locality. There are red and grey syenites, porphyries, granites, grits and sandstone, either from Cumberland or the south of Scotland, but not a fragment, as far as I have hitherto seen, of Poolvash or Ronaldsway limestone, though there can be little doubt that the materials of the hillock have been transported hither across the limestone area of the Isle of Man.



Did some great wave, caused by the sudden upheaval of a mighty mountain-chain from the bosom of the ocean, sweep across the area of the Irish Channel, and bearing onwards in its resistless course a rocky storm of the torn-up debris of the strata over which it had passed, break upon the eminence of this islet, which stood up an unlucky reef in its mid-progress? On such an hypothesis it seems hard to account for the regularity of the deposit and the apparently quiet manner in which the different materials have assumed their present position, together with the absence of the limestone rocks of the immediate neighbourhood.

On the other hand, can we look upon this stratified boss of boulders, gravel and sand, simply as a relic of the ancient sea-bottom, a kind of upper terrace of drift-gravel, and aggregated under circumstances similar to those under which was spread out the platform of which a fragment has just been noted near the Burrough, and of which another fragment may be noted down there by the sea-shore of the north of this islet? Then it seems very strange that such a mass should have remained on the subsequent elevation of the island, just upon this one prominent spot, and not in the hollows which surround it on almost all sides. There is for instance, about eighty yards to the eastward, a deep depression, in which is a turf-bog, whence a little stream takes its rise. We may stand in that hollow, and singular as it may appear, though we are closely surrounded by sea on all sides, and the extent of the islet of the Calf is only 800 superficial acres, not a glimpse of the salt water can we catch, look which way we will, and yet in this hollow we can detect no such bed of gravel and sand, no tokens whatever of an ancient sea-bottom.

The only hypothesis which to my mind seems capable of being applied with any show of plausibility to the solution of the problem, is that which I have suggested in my

memoir of the "Geology of the Calf of Man," published in the Proceedings of the Geological Society of London in 1847\*. It is that of a grounded iceberg, or stranded mass of packed ice, melting and depositing quietly its load, gathered on far-distant shores, whilst subjected to the gentle action of a drifting current coming from the E.N.E., or nearly magnetic east. And the inference which I have further drawn from the phænomenon is, that the sea-level of that period was relatively with the Isle of Man 400 feet at least higher than now, *i.e.* that there has been an elevation of the whole sea-bottom of this neighbourhood since the time of this deposit, amounting to at least 400 feet in perpendicular height.

I would not urge this hypothesis to the exclusion of that of a diluvial action as having at some former period passed over the island; indeed there are other phænomena elsewhere which to me seem capable of being explained only on this latter supposition; perhaps the scattered boulders which we trace even to the highest point on the islet at Bushel's House are also attributable to such action; but what I would simply urge is, that the sweeping of great waves of translation seems inconsistent with the accumulation of so quietly stratified a deposit as this gravel boss, on so exposed a point, and that therefore the diluvial action must have taken place prior to this accumulation, which we must rather attribute to the deliquescence of loaded ice in a not very much troubled sea†. The question of the

\* See Quarterly Journal of the Geological Society, May 1st, 1847, p. 179.

† It might perhaps be argued, that the elevation of the Calf Islet and the great mountain-chain of the island, of which it is evidently a continuation, took place after the accumulation of the drift-gravel; but it was in anticipation of such an argument that I have directed attention to the circumstance of this drift deposit lying undisturbed

diluvium itself will come before our notice when we ascend South Barrule and Irej-na-Lhaa, and track the granite boulders from their summits to the origin of them.

The panorama from the summit of the gravel boss on the Calf Islet is of the finest possible character. Looking northward, the whole of the southern portion of the Isle of Man appears spread out as a map for our study. To the eastward lie the deep indentures of Poolvash Bay and Castletown Bay; the rich corn-lands rising from the water's edge and spreading far up into the interior of the country, and the different objects which we have noted in our peregrinations now become familiar to us, dotted here and there over the fair landscape. To the westward again the scenery presents a contrast the most complete. Stupendous rocks pile upon pile stretch far away northwards, black, frowning and precipitous. Immediately in front rise the Mull Hills, and beyond, uplifted as it were each one on the shoulders of the nearer to us, the eye rests successively on Brada Head, Ennyn Mooar, Slieau-y-Carnaane, Irej-na-Lhaa, and the majestic South Barrule. The first four of these descend at once without a rest or break right down from a height of between 600 and 1200 feet into the western sea, and yet they cradle at their base the lovely quiet bays of Port Erin and Fleshwick. And look! there we catch a far-off glimpse of the Niarbyl and the opening out of Glen Rushen where the turbid waters from the Beckwith Mine come pouring over the pretty waterfall of Glenmeay\*. Beyond is Con-

across the great line of fault passing hence through Port St. Mary and Strandhall to Athol Bridge. When the Isle of Man was elevated out of the Pleistocene sea, the whole area of the Irish seabottom seems to have been raised with it.

\* The Waterfall of Glenmeay (the *rich valley*, Mea or Meay being Manx for *luxuriant* or *fertile*) is a favourite resort of tourists easily accessible from Peel; or it may be taken in the way from Castletown to Peel by those who adopt the higher mountain road thither over

trary Head, where the great tides coming into the Irish Channel from the north and south twice each day struggle for the mastery and twice each day retire with doubtful victory. The whole scene closes in that direction with the hills above Peel and Corrin's Folly mounted upon the saddle of the round-backed Horse\*.

On a clear day from the same point we may pick out the more prominent points of the north-eastern coast of the Emerald Isle, the Arklow and the Mourne Mountains, and the high land about Carlingford Bay and Lough Strangford. Anglesey and the Cambrian and Cumbrian Mountains present a dim blue outline in the southern and eastern horizon; and dotted over the bosom of the great deep are countless sails, the fair wings of commerce speeding their flight to the farthest-off regions of earth. Whilst enjoying such scenes from this spot on a clear sunny day, when all appears pleasure, peace, and security,—the little cloud no bigger than a man's hand rising up in the far south-western horizon, distinct harbinger of the storm and darkness soon about to cover the ocean and the air, will remind us of the truthfulness of the metaphor which Gray's bard scratched out when he sang,—

“Fair laughs the morn and soft the zephyr blows,  
While proudly riding o'er the azure realm,  
In gallant trim the gilded vessel goes,  
Youth on the prow and Pleasure at the helm,  
Regardless of the sweeping whirlwind's sway  
That, hush'd in grim repose, expects his evening prey.”

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South Barrule. The geologist will be interested in the patches of drift-gravel by the side of the road between Dalby and Glenmeay, and the pleistocene series may also well be studied at the mouth of the glen half a mile below the waterfall.

\* The Horse is the name given to the rounded hill rising southward of Peel Castle.

A far different scene was once witnessed from this spot (so says the legendary history of this isle) by a grim Norwegian hunter, which, as it has to do with the name of the little islet lying down there in the Race or Sound of the Calf, we may as well relate as the conclusion of this chapter, pretty nearly as Waldron has given it in his strange record\*:

“In the days of Olave Godredson there resided in Man a great Norman baron named Kitter, who was so fond of the chase that he extirpated all the bisons and elks with which the island abounded at the time of his arrival, to the utter dismay of the people, who dreading that he might likewise deprive them of their cattle and even of their purre† in the mountains, had recourse to witchcraft to prevent such a disaster. When this Nimrod of the north had destroyed all the wild animals of the chase in Man, he one day extended his havoc to the red deer of the Calf, leaving at his castle on the brow of Barrule only the cook, whose name was Eaoch, (which signifies a person who can cry loud,) to dress the provisions intended for his dinner. Eaoch happened to fall asleep at his work in the kitchen; the famous witch-wife Ada caused the fat accumulated at the lee-side of the boiling pot to bubble over into the fire, which set the house in a blaze. The astonished cook immediately exerted his characteristic powers to such an extent that he alarmed the hunters in the Calf, a distance of nearly ten miles. Kitter hearing the cries of his cook and seeing his castle in flames made to the beach with all possible speed, and embarked in a small currach‡ for Man, accompanied by nearly

\* Waldron, page 185. See also Train's History of the Isle of Man, vol. ii. p. 177.

† A wild species of swine at one time common in the mountain districts.

‡ The Currach or Coracle was a kind of light boat of the Ancient Britons formed of a slender framework of timber connected by short

all his attendants. When about half-way the frail bark struck on a rock (which from that circumstance has since been called Kitterland) and all on board perished.

"The fate of the great baron and the destruction of his followers caused the surviving Norwegians to believe that Eaoch the cook was in league with the witches of the island to extirpate the Norwegians then in Man, and on this charge he was brought to trial and sentenced to suffer death. The unfortunate cook heard his doom pronounced with great composure, but claimed the privilege, at that time allowed to criminals in Norway, of choosing the place and manner of passing from time into eternity. This was readily granted by the king. 'Then,' said the cook with a loud voice, 'I wish my head to be laid across one of your majesty's legs and there cut off by your majesty's sword Macabuin, which was made by Loan Maclibhuin, the dark smith of Drontheim.'

"It being generally known that the king's scimitar could sever even a mountain of granite, if brought into immediate contact with its edge, it was the wish of every one present that he would not comply with the subtle artifice of such a low varlet as Eaoch the cook; but his majesty would not retract the permission so recently given, and therefore gave orders that the execution should take place in the manner desired.

"Although the unflinching integrity of Olave was admired by his subjects, they sympathized deeply for the personal injury to which he exposed himself rather than deviate from the path of rectitude. But Ada, the witch, was at hand; she ordered toads' skins, twigs of the rowan-tree, pieces of wood and covered with hides. They were sometimes so small as not to consume more than three hides in their manufacture. It was in such a boat that St. Maughold was cast ashore at the head which bears his name.

and adders' eggs, each to the number of nine times nine, to be placed between the king's leg and the cook's head, to which he assented.

"All these things being properly adjusted, the great sword Macabuin, made by Maclibhuin, the dark smith of Drontheim, was lifted with the greatest caution by one of the king's most trusty servants and laid gently on the neck of the cook; but ere its downward course could be stayed, it severed the head from the body of Eaoch, and cut all the preventives asunder except the last, thereby saving the king's leg from harm. When the dark smith of Drontheim heard of the stratagem submitted to by Olave to thwart the efficacy of the sword Macabuin, he was so highly offended that he despatched his hammerman, Hiallus-nan-urd, who had only one leg, having lost the other when assisting in making that great sword, to the Castle of Peel to challenge king Olave or any of his people to walk with him to Drontheim. It was accounted very dishonourable in those days to refuse a challenge, particularly if connected with a point of honour. Olave, in mere compliance with this rule, accepted the challenge, and set out to walk against the one-legged traveller from the Isle of Man to the smithy of Loan Maclibhuin in Drontheim. 'They walked o'er the land and sailed o'er the sea,' and so equal was the match that when within sight of the smithy, Hiallus-nan-urd, who was first, called to Loan Maclibhuin to open the door, and Olave called out to shut it. At that instant, pushing past him of the one leg, the king entered the smithy first, to the evident discomfiture of the swarthy smith and his assistant. To show that he was not in the least fatigued, Olave lifted a large forge-hammer, and under pretence of assisting the smith, struck the anvil with such force that he clave it not only from top to bottom, but also the block upon which it rested. Emergaïd, the daughter

of Loan, seeing Olave perform such manly prowess, fell so deeply in love with him, that during the time her father was replacing the block and the anvil, she found an opportunity of informing him that her father was only replacing the studdy to finish a sword he was making, and that he had decoyed him to that place for the purpose of destruction, as it had been prophesied that the sword would be tempered in royal blood, and in revenge for the affront of the cook's death by the sword Macabuin. 'Is not your father the seventh son of old Windy Cap, King of Norway?' said Olave. 'He is,' replied Emergaid, as her father entered the smithy. 'Then,' cried the king of Man, as he drew the red steel from the fire, 'the prophecy must be fulfilled.' Emergaid was unable to stay his uplifted hand till he quenched the sword in the blood of her father and afterwards pierced the heart of the one-legged hammerman, whom he knew was in the plot of taking his life."

The sequel of the legend is that Olave married the fair Emergaid, and from that marriage descended a long line of kings of Man down to Magnus, the last of the race of Goddard Crovan.



## CHAPTER XII.

Port Erin.—St. Catherine's Well.—Brada Head and Copper Mine.—View from Grammah.—Fairy Hill, Fleshwick Bay.—Manx peasantry, cabins, carranes, and Sunday blankets.—Origin of the names Lezayre and Arbory.—The Friary.—Upper limit of the boulder-clay.—Grenaby.—St. Mark's.—The Black Fort and Sir Walter Scott.—Granite blocks and Goddard Crovan's Stone.—Structure of granite.—Bubble of South Barrule.—Ascent of the mountain.—Evidence of great cataclysmal action.—Strike of parallel mountain-chains.—Mines and Minerals.—Slieauwhallin.—Witchcraft.—Tynwald Mount.—Ancient ceremonies.

PORT ERIN (or as it is sometimes called, Port Iron) presents a genuine specimen of a Manx fishing village. Old herring-nets spread upon the thatch of cottages, and big stones\* tied at each corner to keep all safe down; semi-putrid fish drying in the sun against the walls; pigs and poultry roaming about and picking up refuse; the heads and entrails of hake and congers; heaps of the shells of the limpet, periwinkle, scallop, and whelk; old inverted boats hauled up and ranged along the walls; lobster-pots strewn about on the shore; and rumpy cats basking in the sun.

'Tis a splendid beach, and the prettiest bay in the island! If it were on the southern coast of England, it would beyond all doubt become a favourite watering-place. A little of the public money would make it a valuable haven, and a

\* Generally speaking the thatch is tied down by *suggany* (straw ropes) made fast to pieces of stone (called *bwhid suggane*) which jut out from the walls, though not unfrequently (almost always in the case of hay and straw stacks) the ropes are fastened to large stones which hang down loose on every side. See the frontispiece view of King William's College from the Creggins.

great accommodation to the herring fleet when lying off the western coast of Man. Her Majesty's mail has been landed here when it could not be landed in Douglas; but there is no great landed proprietor resident on the spot, no one to plead the claims of the poor fishermen, and so, like Derbyhaven, with great capabilities it lies neglected and almost useless\*.

How magnificently does Brada Head rise up, shutting in the northern angle of this horse-shoe bay! The mines of copper there, which at the beginning of the seventeenth century seem to have been wrought to some extent, have latterly been almost abandoned. The only copper at present raised on the island seems to be at Laxey, where it is worked along with the lead and zinc and afterwards separated by hand. The mouth of the mine is with difficulty accessible when the tide is out.

In proceeding across from Port Erin to Fleshwick Bay on foot we cross the little hill Grammah, from which a very fine view is presented. It is probably the only point at so low an elevation where both the east and west side of the island can be seen at the same time. We catch a view of Dalby Point near Peel, and of Castletown and its neighbourhood, and turning round south-westward we have a fine view of the Calf Islet and the Stack. Just in the hollow here on the northern side of the hill, and in the meadows at the west end of Rushen parish church, there is a magnificent tumulus†, known by the name of Cronk-na-mooar

\* St. Catherine's Well gushes out of the sand by the sea-shore. In the old maps of the island we find mention made of St. Catherine's Chapel, but it has disappeared along with the Chapel at Port St. Mary, and that which once existed in this parish at Balla-keill-Moirey (the place of Mary's Cell or Chapel), as the name plainly indicates.

† It is 450 feet in circumference and 40 feet in height, and surrounded by a ditch.

and Fairy Hill. In so many instances \* it has been determined by actual examination that these barrows or elevated mounds of earth, as well as the cromlechs and the so-called druidical circles, are places of sepulture, that it seems useless to note the conjectures which have been hazarded by different persons as to the original intention of this carnedd in the valley here at our feet.

It may be remembered † that Reginald, son of Olave the Black, was slain here in 1249 by the knight Ivar; as we have however the record of his interment in the church of St. Mary of Rushen, this is evidently not *his* mausoleum. Nor is it certain that any battle took place on that occasion between the followers of Reginald or Ivar, otherwise we might presume that it covers *their* remains. It is probably of a very much earlier date than the thirteenth century.

In descending from our station on Grammah towards the parish church, some gravel-pits on the road-side give a good insight into the structure of the drift-gravel platform, and it is well to examine it at this point in immediate connexion with the underlying boulder-clay, which is very finely developed in the cliffs at the head of Port-Erin Bay. The scooping-out of the tertiary gravels at the period of the elevation of the land may be well studied in this immediate neighbourhood.

\* See the *Archæological Journal*, vol. i. p. 142, and vol. iii. p. 223. Chaloner, in his *Account of the Isle of Man*, writes thus: "Whilst I remained on the island I caused one of those round hills to be opened, in which were found fourteen rotten urns or earthen pots placed with their mouths downwards, and one more neatly than the rest in a bed of fine white sand containing nothing but a few brittle bones, (as having passed the fire,) no ashes left discernible: hereabouts are divers of these hills to be seen; but in other parts of the isle, few and dispersedly; some of these being environed with great stones picked endways in the earth."—Chaloner's *Account*, p. 10.

† See page 101 *supra*.

An excursion hence into Fleshwick Bay will never be regretted by any true lover of the wild and stupendous in Nature's beauties, though the road for carriages is none of the best. Brada and Ennyn Moar, sinking down precipitously into the western sea with bluff and frowning look\*, were at one time quite separated by a narrow channel corresponding with the Kitterland Strait, through which, during the pleistocene period, the sea continually flowed. Now they are connected by the upheaved tertiary sea-bottom. A sufficient inroad has however been made in these gravel and clay beds to form a snug little creek tolerably secure from all winds but the north-west for only very small fishing craft.

I have been in few places where a sense of solitude rested more powerfully upon me than here. It has often put me in mind of some of the more sequestered valleys in Wales, Cumberland, or the Peak of Derbyshire, as I have watched the tiny sheep† perched goat-like upon points of rock, or dashing headlong‡ in their fright at the stranger adown a rugged chasm, the tinkling of the bell and their shrill bleat echoing most wildly from mountain to mountain. Here will be heard, I verily believe, more Manx than in any other part of the Sheading, and the simple habits of the natives can scarcely be studied in a better locality than

\* Three winters ago a fine vessel, the 'Wilhelmina' of Glasgow, bound for Leghorn, was dashed to fragments against these adamantine precipices, and every being on board of her perished. It was utterly impossible to render any help from the shore, though attempts were made by letting down ropes from the crags above.

† Quarters of mutton may frequently be had not weighing more than 8 lbs.

‡ Instead of walls and hedges, in the Isle of Man the fields are mostly divided by banks of earth, on the top of which gorse is sown, and forms a tolerable fence. To prevent the cattle, horses, cows and sheep from climbing over, the hind and fore legs of the animal are fastened together by a rope or straw band. This is called *lanketting*.

this. Here, if anywhere, we may expect to meet with carranes\* instead of shoes, Sunday-blankets† for cloaks, bundles of gorse for gates and doors, loaghtyn‡ sheep and relics of the ancient race of purrs, and here the true samples of Southside Manx cabins; and their inmates are (generally speaking) sufficiently well-off not to be solicitous about anything better. They enter most fully into the spirit of the adage, "Man wants but little, nor that little long." They are certainly an independent race, which may seem to some remarkable when they consider the many masters they have had at different times, and the frequency with which the island has changed hands. I am however myself inclined to attribute much to the absence of a poor-law on the island, and to the operation of the insular law (to which they are very strongly attached), which gives power to the wife over a considerable moiety of the husband's goods, which she can settle away independent of his wishes or interests. An unruly son whom his father would cut short may thus fall back securely upon the more tender feelings of his mother. It has however frequently kept family property together, and

\* The carrane is made by placing the foot in a raw neat's hide, cutting out a convenient portion, which is then drawn up over the foot and laced with a thong. The hair is outside. Old rags are sometimes placed under the sole of the foot, or portions of pitched sheepskin, to prevent the wet coming through.

† In the *Lex Scripta* of the Isle of Man it is given for law that the Sunday-blanket (an equivalent of the Scotch tartan) shall descend as an heir-loom in the female line direct. It is to this that Camden alludes when he says that "the women of the island, whenever they go out of doors, did clothe themselves in a winding-sheet to keep them mindful of their mortality."—Mr. Quayle's MS. quoted above.

‡ Loaghtyn or Lugh-dhoan (*lugh*, mouse, and *dhoan*, brown) is the name given to a peculiar breed of sheep having a dirty brown fleece, which was once common on the island, but has almost disappeared.

liberated estates which the dissipation of the father would have impoverished. Hence the affection of the islanders for this ancient law.

It would be easy, on foot or horseback, to ascend the mountain-range from Fleshwick Bay and to take the bridle-road over in that direction to Peel; but it suits us better to return towards Castletown by the inland road for a couple of miles, and then to turn up the hill-side by the road to Grenaby, and so into the Peel road from Castletown. We pass on our way Christ's Rushen parish church, Colby glen and Arbory church, and turn off at the Friary, an ancient Cistercian cell in connection with the Abbey of Rushen. It is amusing to note sometimes the strange reason assigned for the names of places; thus Chaloner tells us\* Kirk Christ's Rushen is so called from "being built on the side of a rushy bog;" Kirk Arbory, because formerly surrounded with trees arbour-like, and Kirk Christ's Lezayre because it is "placed in a sharp air." For my own part I am inclined to give the following derivation of the names. The parish churches of Christ's Rushen and Lezayre are dedicated in honour of the Holy Trinity, and it may not be easy to determine why the name of the second person in particular has been applied to them. They stand respectively in the sheadings of Rushen and Ayre. We have before† noted the origin of the name Rushen, in St. Russin, a fellow-labourer of St. Columba, and I know no reason why Lezayre should not be derived from the Manx *lesh*, towards or belonging to, and Ayre, the name of the sheading‡. Again, if we look

\* Chaloner's account, page 6.

† Page 58, *supra*.

‡ The only other two parishes on the island not called by the name of the patron Saint are Ballaugh and Jurby, and the reason plainly is to avoid the confusion of two St. Mary's and two St. Patrick's on the isle. There was the abbey church of St. Mary of

at the old map of the island\*, which Chaloner himself has given in his book, we find Kirk Arbory written Kirk Kerebrey. Now we know that St. Cairbre, a disciple of St. Patrick, attained to considerable celebrity towards the close of the fifth century, and though Sacheverell states, seemingly on his own authority, that the patron saint of Kirk Arbory is St. Columba, I am much more disposed to give that honour to his senior St. Cairbre, and to conclude that, just as Kirk Conchan has been corrupted into Kirk Onchan, so Kirk Cairbre has easily slidden into Kirk Arbory.

We ascend the mountain-side by the road which turns up between Parville and the Friary† and passes by Balla Clague. The road traces along the upper limit of the boulder clay, and we begin to be struck with the number of large granite blocks which rest upon the surface; they have largely afforded materials for building, but we still find them in the banks on each side of the road, and on the top of the hill before we descend toward Grenaby there is an accumulation of them in the corner of a farmyard.

The view of the southern basin of the island from this point is particularly fine. We are sufficiently elevated to have the whole spread out as a map before our eyes, and to comprehend it almost at a glance, and at the same time we are sufficiently near to dwell upon and to note distinctly any object about which we are specially interested.

Rushen, and so the other St. Mary was called Ballaugh or Ballalough (the place of the lake). There was St. Patrick of the Peel, and so the other St. Patrick was called Jurby, from the isle of Jurby in which the church stood.

\* See Plate IV.

† A relic of the ancient building may be remarked in an old barn, whose windows and doorway have somewhat of an ecclesiastical character: all else has disappeared. Of the old mill nothing now remains but the sluice. It was anciently called Bemaken, Bimaken and Brimaken.

Descending to Grenaby we come upon a well-wooded valley, through which the Silverburn has cut its way, and the old mill and the contiguous bridge form nice subjects for the sketch-book. The road ascending towards Barrule has been cut through a mass of the boulder clay, and presents a convenient section for its study. There is a road leading hence direct across the country for St. Mark's, but it is hardly practicable for vehicles. The more advisable route is to continue on the road which runs on the brow of the hill skirting the western side of the valley of the Silverburn, till we get into the Peel road near Ballahot. Here again, just before we descend to Athol bridge, we note, at the point where the road-cutting exposes the old red conglomerate resting on the upturned and contorted schists, a fine accumulation of granitic blocks, and there is, as we shall see, the Silverburn valley interposed between them and their origin.

After proceeding a couple of miles on the Peel road, we may if we choose turn off on the right hand by a good road leading to St. Mark's, and visit the spot which Sir Walter Scott has rendered famous as the Black Fort in 'Peveril of the Peak'\*. Hardly a trace now remains of the old Danish rampart; but the field where it stood (a portion of glebe which the present chaplain of St. Mark's has reclaimed out of a dreary waste) has been christened after the "Great Unknown," whose description of the locality is both highly picturesque and faithful†. It is not far

\* Vol. i. p. 264, edition 1822.

† The famous granite boulder weighing between twenty and thirty tons, known by the name of Goddard-Crovan's stone, stood close by. It was broken up by the owner of the field about twenty years since: some fragments of it are built into the parsonage. The old legend of the stone is, that Goddard lived with his termagant wife in a great castle on the top of Barrule. Unable to endure the violence of her tongue, he turned her unceremoniously out of doors; after descend-



from St. Mark's chapel on the western side hard by the little purling brook, which rising in the granitic boss of South Barrule, and taking a southerly course, meets the Silverburn a little above the Crossag bridge at Ballasalla. The stream is choked up with the blocks of granite, and they are accumulated against every salient angle in the valley, and spread out in every little alluvial flat for a considerable distance.

It is very plain that the accumulation of granite blocks in this direction is owing to a very different cause to that which has lodged them in the valley of the Silverburn at Grenaby, and perched them on every eminence along the mountain-range both on the eastern and (as we shall see) the western sides of it, and even on the very summits of South Barrule and Ireyna-Lhaa. We must certainly mark here the different effects of alluvial and diluvial action. But we must keep in mind also the fact, which the gravel boss on the Calf of Man has tended to establish, that the sea-level at one point in the period of the boulder formation, was at least 400 feet higher relatively with the land in this neighbourhood than at present. It would therefore almost wash the base of this granitic boss on South Barrule. It was a glacial period, one in which the carrying power of ice was much brought into play, and therefore the granite blocks which the little burns, taking their rise in that eminence, brought down to the sea were frozen into shore-ice, drifted off a mile or two by the currents along the coast and stranded here and there on the lower eminence where they accumulated on the deliquescence of the ice. We may in this way account for their occurrence

ing the mountain some distance, imagining herself out of his reach, she turned round and began to rate him so soundly at the full pitch of her voice, that in a rage he seized on this huge granite boulder, and hurling it with all his might killed her on the spot.

over the greater part of the southern basin of the island without having recourse to any violent cataclysmal action, since when we come to examine the matter, we find that all the points of the occurrence of these blocks which lie to the east and south of the granitic boss are at a *lower* level than it; but we must plainly look to some other cause to explain their occurrence on the western and south-western side of the boss at a *much greater* elevation.

Now let us examine this great ellipsoidal granitic bubble. It rises up in a fine dome, around the base of which mantle a series of metamorphosed rocks, gneiss and mica-schist\*, passing gradually into the ordinary clay-schist of the island. Great masses of white quartz rock lie strewn about on the surface, and have been carried along with the granite blocks a great distance to the south-westward†. It presents a complete *wilderness of blocks*, dreary and desolate and black with heather; the very blades of coarsest grass seem to struggle hard upon it for a miserable existence; here and there a swampy hollow has gathered together a foot or two of peat, where the cotton-grass (*Eriophorum polystachion*) finds a wretched habitat.

Baron Von Buch, in his description of the Brocken, in a paper read before the Berlin Academy of Science, (December 15, 1842,) has given us a good insight into the structure of these granitic bubbles. The beautiful bell-shaped form of that mountain, as presented to persons approaching it from Elbingerode by way of Schierke, is particularly striking. There is an exquisite repose in the landscape which rests upon its parabolic surface, of which the outline is so distinct, that a small cottage on the top, which would hardly be noted on other mountains, stands

\* I have, from the north side of this boss near the Foxdale mines, specimens of mica-schist which contain imperfect garnets.

† A dyke of white quartz cuts through the eastern side of the boss from north to south.

out prominently as a small wart. We might at a distance suppose it smooth and polished, but an actual approach exhibits it as covered with innumerable blocks, heaped on each other without any appearance of regularity.

Now these two very general phenomena, the regularly circular form of granitic mountains, and the breaking up of the surface into millions of blocks, seem to depend on one another in some relation. Baron Von Buch suggests that granite mountains are lifted up in a certain plastic condition, not as lava in a perfectly fluid state filling up fissures, but in thick ellipsoidal bubbles, by forces acting from beneath; in the ultimate cooling and contraction of the upper dome-shaped surface, it will necessarily break up into a vast number of blocks, forming what have not been unaptly termed "seas of rocks." At the same time the granite arranges itself in cooling into large concentric layers, gradually diminishing in size, until at last the innermost nucleus appears cylindrical, as may be seen in bosses of small extent, and this remarkable concentric arrangement may very readily be mistaken for stratification.

The granite of South Barrule\* is a true granite, consisting of flakes of mica, and small crystals of pinky-white quartz in a matrix of white felspar, the felspar greatly predominating. A somewhat coarse and not very hard rock is the result, of which the general appearance when wrought is not unlike some of the coarse specimens which I have seen of millstone-grit. Till lately it has only been used in buildings in its rough state, occasionally for gate-posts and farm-rollers, but within the last year a company has been formed, who have commenced working a quarry†

\* The surface of this granitic bubble is about a mile long, by three quarters of a mile wide.

† It has been wrought into excellent millstones, and the new church of St. John near the Tynwald hill is being erected wholly of granite from this quarry.

for its export in a wrought condition. It has a slight tendency to decompose in concentric layers, which is probably due to the predominance of felspar; but if care be taken in reference to this, in the arrangement of the blocks in building, there is no doubt, from the evidence afforded by old cottages and barns on the island, that it will be found a very durable material.

Of the age of this granitic bubble I can only offer the negative evidence, of its not having appeared at the surface at the period of the old red conglomerate, from the absence of any boulders of it in that formation in all researches hitherto on the island. But these boulders do appear in the boulder-clay formation. Either then its elevation took place in the interval between the carboniferous epoch and that of the pleistocene tertiary beds; or, if it were anterior to the carboniferous epoch, it has been since exhibited on the surface in consequence of that extensive denudation, of which we have other clear evidence as having passed over the island\*. I am inclined to this latter view, though still supposing a second elevation of the granitic mass, during which were injected into the cracks and fissures then formed those elvans or granitic veins† which we find penetrating far into the schists round about this boss, three of which are cut through in the Foxdale mine‡.

The whole of this district forms a grand mining country,

\* See the last chapter.

† See Map I., section across the island.

‡ The granite of the veins is much finer than of the great mass of the boss. I have specimens from an adit which passes under the Peel road, which seem to consist almost entirely of felspar, with some large crystals of schorl. The richness of the mineral-veins increases as they approach the granitic mass; and at the contact, I have been informed, the quantity of silver in the lead-ore was found to average 108 ounces per ton.

and has been opened at several points along a line running E.N.E. and W.S.W. (which is the general strike of the productive veins) between Glen Rushen and Ellersley in Maroun parish. The Beckwith mine in Glen Rushen, the Cronk Vane (white hill) mine on the north-eastern side of South Barrule, and the Foxdale mines (including under this latter term the Cornelly or Jones' vein), belong to one company, who hold them on lease from the Crown. The Mona mine at Ellersley is in the Bishop's barony, and is held from him on lease by a different company.

The distribution of the mineral veins of the common sulphuret of galena (lead), in this neighbourhood is somewhat singular, approaching rather to that of mountain-limestone districts than of Silurian countries. The veins often swell out into large sops, which sometimes terminate again in scrines or small rake-veins, spreading out from one great trunk. There is therefore necessarily great uncertainty and speculation in the working. The miner comes suddenly upon a vast body of ore, of which he had previously little or no indication; in the midst of his work, whilst following up, as he imagines, a continuous pipe-vein from fifteen to twenty feet in width, as suddenly it seems to die out, and without the least warning he finds his mine exhausted and his works stopped\*.

The ascent to the summit of South Barrule is by no means difficult. There is a very fair road leading over the pass between that mountain and Irey-na-Lhaa, which communicates with Colby, Arbory and Grenaby; and with the Peel road from Castletown near the sixth milestone on the western edge of the granitic boss. In following the road from this latter point, we shall be tracing the course along

\* For an account of the mines in the Isle of Man, see Appendix, Note K.

which the blocks of granite from the boss have been driven, and we shall find them diminishing in number and size the further we proceed. The height of the pass above the granitic boss is about 200 feet, and the granite boulders have been driven over it to the western side of the mountain-range, and occur scattered at wide intervals over a large extent of country, and may be met with in the bed of the Glenmeay river, into which they have been carried by the streamlets which flow into the vale of Glenrushen. We catch them here and there running along the ridge which unites Irey-na-Lhaa with South Barrule, and I have picked up a few of them the size of a good cannon-ball quite on the top of Irey-na-Lhaa, a height of 1445 feet above the sea, and near 700 feet above the top of the granitic boss\*. But the most remarkable circumstance is, that in ascending from the pass to the summit of South Barrule we fall in with three or four of considerable size, and there is one which I have noted within sixty feet of the top of the mountain, and quite on the western side of it, certainly not less than two tons weight. The summit of South Barrule is in a direct line between this granite boulder and the granitic boss whence it has come, and the difference of height is 788 feet. But there is a slight depression between the granite boss and the ultimate rise of the mountain, across which the boulder must have been transported, viz. that in which the sixth milestone stands, and this milestone is distant about a mile and a

\* I have taken the heights as given by Dr. Berger, in his paper in the first volume of the Transactions of the Geological Society of London, as ascertained by barometrical observations. According to this measurement (which I believe very near the truth) South Barrule is 1545 feet, Irey-na-Lhaa, 1445 feet, the granitic boss (which he calls Dun-how), 757 feet, the pass between South Barrule and Irey-na-Lhaa, 983 feet, the sixth milestone on the Peel road from Castletown, 692 feet above the mean sea-level.

half from the top of the mountain. Hence we have a rise of 853 feet in a mile and a half up which the granite boulder ascended to the top of South Barrule, and then slid down some sixty feet on the other side. Had there been but one boulder, we might perhaps have concluded that it had been carried thither for some purpose by human agency, but the circumstance of there being so many scattered at random all over the surface of the mountain precludes such a supposition.

Here then, it seems to me, we have the evidence of some great diluvial action, an indication of enormous waves with great carrying power sweeping over the surface of the island, and breaking upon the mountain summits. How far the transport of these granite boulders may have been aided by their being frozen (perhaps) into masses of ice, must remain a mere speculation; but I do not see how it is possible, with any conditions of relative sea-level, to account for the phenomena here presented to us by any known effects of ice alone, and without taking into the reckoning the agency of some great cataclysm or series of cataclysms. Here if anywhere certainly we must have recourse to the theory of great waves of translation proposed for our acceptance by the gifted author of the *Silurian System*.

The scene from the summit of South Barrule is of a most magnificent character, not presenting the wildness and vastness of the Cumberland, Welsh or North British mountains, but perhaps a greater variety. England, Scotland, Ireland and Wales, surrounding the blue ocean, in which like some monster ship the Isle of Man seems to float, are caught sight of on a clear day from as it were one of the mast-heads of the vessel. The importance of this look-out is seen by the selection of the spot in the 'Trigonometrical Survey' for connecting the triangulation

of Ireland with Great Britain. All the more notable points, both on the coasts of the Irish Sea and for a considerable distance inland, come within the uninterrupted sweep of our instruments, if we except the neighbourhood of Kirkcudbright in the south of Scotland, which is hid by the intervening loftier eminences of Sneafell and North Barrule in the north of the Isle of Man.

How easy is it on a bright summer day, when seated beneath the pile of stones which crowns the summit of the mountain, to enter into the feelings of the noble Earl of Derby, where writing to his son Charles\*, he says, "When I go on the mount you call Barrule, and but turning me round can see England, Scotland, Ireland and Wales, I think shame, so fruitlessly to see so many kingdoms at once (which no place, I think, in any nation that we know under heaven can afford such a prospect of), and to have so little profit by them!"

The geologist could hardly desire a better point for obtaining a bird's-eye view of the arrangement of the insular mountain-chain, and the relation it bears to the coast line and the tertiary formation of the lowlands. He finds himself here clearly upon a saddle whose axis runs E.N.E., with the beds of dark glossy schist dipping off towards Castletown on the one side and Peel on the other; at the same time there are some traces on the southern side of the mountain of a fault in the same direction as this axis, as if in the upheaval the saddle had cracked on that side, and permitted the N.N.W. portion to be somewhat more elevated than the other.

This same ridge or saddle is continued in a direction W.S.W. to the summit of Irey-na-Lhaa, where it terminates abruptly. It seems to die away more gradually

\* In 1643. See Peck's *Desiderata Curiosa*, vol. ii. p. 438.



towards the E.N.E., passing over the granitic bubble on Dunhow, and sinking down into the lower hills of Maroun parish\*.

Parallel to this ridge we have that which ought properly to be called the great central axis passing through Slieauwhallin† and North Barrule as most prominent extreme points, and including Sneafell the highest mountain of the island and Greebah 1478 feet high. There is again another secondary range to the north-west of, and parallel to, this, containing some prominent points, in which we may include Rock Mount near Lhargydhoo, Sartel‡, Slieaunfraughane, Pelier and Mount Karrin.

Between these ranges are very deep synclinal depressions, which form the drainage of the country, as indicated by several of the rivers or their main branches. Other valleys are thrown off at right-angles, and along these generally speaking the gathered waters find their outlet to the sea.

On the summit of South Barrule there are indications of ancient fortifications, inclosing an irregular area of 22,000 square yards, the thickness of the base of a wall on the northern side being upwards of nine yards. When we call to mind that the ancient name of this mountain was Warfield or Warfell, and that on the invasion of the island by Richard de Mandeville§, the Manx retreated towards this

\* Strictly speaking, Garraghan and Bein-y-phot in the northern district are the continuation of this axis; the former is 1520 feet, and the latter 1750 feet, high.

† Slieauwhallin, 978; North Barrule, 1850 feet; Sneafell, 2004 feet. The meaning of Slieauwhallin is *Whelp's Mountain* (Slieau Mountain and *Quallian* Whelp). Barrule is generally derived from *baare* top, and *ooyl* an apple. Perhaps it is *baare-rouail*, wandering or rambling point; Wild Mountain.

‡ Sartel, 1560 feet.

§ See Chap. VIII. *supra* p. 104.

point as their natural stronghold, we shall perhaps be brought to the conclusion that at one time this was a military station of considerable importance\*.

We return into the Peel road, and descend towards St. John's Valley, following the course of a streamlet which takes its rise in the turfy ground near the sixth milestone. It has cut its way in one part along the line of junction of the granite and the schists, and we see the two so closely dovetailed into each other, that the granite has the appearance at one or two points of being an overlying formation. The metamorphism of the incorporated schists is well worth study. The shaft of a mine has been sunk upon their junction, and from a vein running nearly north and south some valuable ore is at present being obtained out of the granite.

A little lower down by the road-side near Hamilton bridge is a very pretty waterfall, which in rainy weather pours down a full torrent some thirty feet over a ledge of clay-schist into a wooded hollow. Hence the valley downwards is of a very fine character, and becomes more and more impressive as we descend. It is refreshing after the desolate, treeless wildness of the granite district, to look upon such a rich combination of wood, water and rock, valley and fell, which here presents itself before us.

Slieauwhallin on our left-hand rises precipitately, on our right Kenna cultivated to the top; immediately in front a low alluvial valley extends athwart the landscape, which is backed by the magnificent Grebah†, rising up dim and

\* We read in Chaloner the following statement:—"Mananan Mac-Bar, a pagan and necromancer, took of the people no other acknowledgement for their land but the bearing of Rushes to certain places called Warrefield and Mame on Midsummer even."—See Description, p. 9.

† Sometimes called Greebey and Kreevey.

gray with its two summits at points north and south from each other, the former to a height of 1478 feet, and the latter 1355. But as we descend further still, our attention is arrested by, and rests exclusively on, Slieauwhallin, and we shudder as we look at its steep northern aspect, running up at an angle of  $45^{\circ}$ , and call to mind the purposes to which in former days superstition devoted it.

We may have read the severe statutes enacted in the fifteenth and sixteenth centuries against witchcraft, both in England and Scotland, under which multitudes of both sexes perished, and it may surprise us to learn that they have been repealed only within the last century and a quarter. But in an island like that of Man, where the wind howls over heathery wilds, the lightning plays upon the summit of cloud-capped mountains, the thunder-peal rolls along dark and deep valleys, and is re-echoed against an iron-bound coast, mingling with the roar of the stormy billow in sea-worn caves and fearfully dismal chasms, we need feel no surprise that in such an island persons should be found seeking gain by practising on the superstitious and awestruck feelings of the ignorant, or that laws should be enacted to suppress if possible such dark practices. Yet there was a classical refinement in the cruelty of these laws, and the manner of their execution. That dank turfy hollow there at the foot of Greebaha was once a wide-spreading lake which glassed the deep shadows of the surrounding mountains. It then had a name indicative of its character, *Curragh-glass*, the "Gray-bog." Many such pools in very ancient days seem to have existed round about here in the valley, scooped out of the great drift gravel platform which spreads out at a level of 125 feet above the sea. They have been gradually filled up by the growth of peat beds, but in the marl beneath the peat have been discovered numerous remains of the antlers and other portions of the

skeleton of the great Irish Elk\*. These majestic specimens of the cervine tribe seem to have come down from their mountain-fastnesses to drink, and the weight of the horny foliage of their heads sunk them in the mire and they perished. In the Curragh-glass those who were suspected of witchcraft met with a similar fate, and happy were they if they perished by drowning there, for then they were acquitted of the charge laid against them, and received the last rites of the church in hallowed ground. But if in the struggle for life they managed to gain a footing again on *terra firma*, then their guilt was established, and the dreadful alternative awaited them of finishing their wretched life either by fire at the stake, or by being rolled down in a spiked barrel nearly a thousand feet from the northern summit of Slieauwhallin.

Those days of cruelty and of blood have happily long passed away, but, alas! the spirit of superstition which prompted such deeds lingers on in the midst of Mona's peaceful mountains, and cases of presumed witchcraft continue still to be obtruded by the credulous peasantry into courts of justice in the Isle of Man†.

And here we have hard by, in the centre of the valley, the Tynwald Mount, the "forum judiciale," the hill of

\* There is a very fine specimen in the possession of Mr. Gell, of the market-place, Douglas, obtained in this locality.

† See Mona's Herald, January 10th 1844. Whilst these sheets have been going through the press, an occurrence has been noted in the public papers which is by no means rare on the island. A farmer in the vicinity of Peel lost one or two of his cattle by disease. To detect the evil eye or avert its malice, he determined on a cow-fire. With turf, coals and gorse a fire was kindled in the centre of the road, upon which the entire carcase of the defunct cow was placed. But an after-thought delayed proceedings awhile. The hide had been sold to the tanner, and an entire sacrifice was deemed essential. The hide was sent for, the purchase-price refunded, and then the holocaust was made. See Manx Sun, October 2nd, 1847.

justice itself, as Bishop Wilson explains it. Of the Scandinavian origin of the name, as well as of the ceremonies connected with this hill, there can be little doubt whatever, let the interpretation of it be what it may\*; and deeply interesting to every patriot Manxman, as well as to every antiquarian, must the sight of this green mound be. Whenever he hears of annexation to England, and a representation in the British Parliament, it ought to be a monitor to him to stand fast for the ancient glory of his country, and to plead hard for the independent laws and the time-honoured institutions of the Isle. Hither, for eight hundred years and more, has the gathering of his ancestors been, and here has the herald proclaimed the decisions of the national council and the laws by which Man should be governed.

The Tynwald hill, called also Cronk-y-Keeillown (*i. e.* St. John's Church Hill), is a mound of earth said to have been originally brought from each of the seventeen parishes of the island. The circumference of the base of it is 240 feet: it rises by four stages or circular platforms, each three feet higher than the next lower: the lowest platform being eight feet wide, the next six, the third four, and the last or topmost being six feet in diameter: the whole is covered

\* The term "thing" is a Scandinavian equivalent of the Saxon *mote*, signifying a court or judicial assembly. Thus we have the Moot or Motehall for the miners' court in Derbyshire, and also the term Barmote, as well as the Wittenagemote of more ancient days. May we not connect the English word hustings with the Scandinavian *thing*? Again Wald is by some said to mean *fenced*, by others to be the same as the Saxon *weald*, a woody place; thus we have the Wealds of Kent and Sussex. The monks of Rushen in their Latin Chronicle wrote the word Tingualla. May not *gualla* be from Gallia? We have Cornwall *cornu Galli*, the Gauls in the horn of England, and Wallia (Wales) from the same root. Thus Tingualla would mean the *British* judicial assembly.

with a short turf, neatly kept. Formerly it was walled round and had two gates.

On the feast of St. John the Baptist a tent is erected on the summit of this mound, and preparations are made for the reception of the officers of state, according to ancient custom. Early in the morning the Governor proceeds from Castletown under a military escort to St. John's Chapel, which is a few hundred yards to the eastward of the Tynwald hill. Here he is received with all due honour by the Bishop, the Council, the Clergy and the Keys, and all attend divine service in the chapel, the Government chaplain officiating. This ended, they march in procession from the chapel to the mount, the military formed in line on each side of the green turf walk. The Clergy take the lead, the juniors being in front and the Bishop in the rear. Next comes the Vicar-general and the two Deemsters, then the bearer of the sword of state in front of the Governor, who is succeeded by the Clerk of the Rolls, the twenty-four Keys, and the Captains of the different parishes.

The ceremony of the Tynwald hill is thus stated in the *Lex Scripta* of the Isle of Man, as given for law to Sir John Stanley in 1417.

"This is the constitution of old time, how yee should be governed on the Tinwald-day. First you shall come thither in your royal array, as a king ought to do by the prerogatives and royalties of the land of Mann, and upon the hill of Tinwald sitt in a chaire covered with a royall cloath and quishions, and your visage into the east, and your sword before you, holden with the point upward. Your Barrons in the third degree sitting beside you, and your beneficed men and your Deemsters before you sitting, and your Clarke, your knights, esquires and yeomen about you in the third degree, and the worthiest men in your land to be called in before your Deemsters, if you will ask

anything of them, and to hear the government of your land and your will; and the Commons to stand without the circle of the hill, with three clearkes in their surplices, and your Deemsters shall call the Coroner of Glanfaba, and he shall call in all the Coroners of Man, and their yarges in their hands, with their weapons upon them, either sword or axe; and the Moares, that is to witt of every sheading; then the chief Coroner, that is the Coroner of Glanfaba, shall make affenece upon pain of life or lyme, that no man make a disturbance or stirr in the time of Tinwald, or any murmur or rising in the King's presence, upon paine of hanging and drawing; and then to proceed in your matters whatsoever you have to doe, in felonie, or treason or other matters that touch the government of your land of Manne."

At the present day the chief ceremony of the Tynwald Hill is the proclamation in Manx and English of all the laws which have been passed during the year; after which the procession returns in the same order as before to St. John's Chapel, where the laws receive the signature of the Governor, Council and Keys, and the business of the day is finished\*.

\* In the neighbourhood of Tynwald Hill two great battles are recorded as having been fought: the one between the brothers Reginald and Olave in 1229, for the sovereignty of the island; the other in 1238 between Lauchlan on the one side, and Dugal Maol Mhuise and Joseph, deputies of Harold, on the other. The latter were slain. See "Chronicon Manniæ," p. 30, and Chap. VIII. p. 100, *supra*.

## CHAPTER XIII.

Peel.—The Castle.—The Round Tower.—The Cathedral.—The Crypt.—Duchess of Gloucester.—Thomas Earl of Warwick.—The Guard-room.—The Moddey Dhoo.—Scenery about Peel.—Glen Helen.—The Rennass Waterfall.—Glen Darragh.—St. Tri-nian's Chapel.—Coast-road from Peel to Kirk Michael.—Geological features.—Glen Willan.—Kirk Michael.—Bishop Wilson.—Discipline of the Manx Church.

HALLAND TOWN, Holene Town and Holme Town, as it was anciently called, and more recently Peel Town and Peel, derives its chief notoriety from the ancient castle and cathedral, situated on a small rocky islet at the mouth of the river Neb, which flowing westward through St. John's vale, and separating the parishes of Kirk German and Kirk Patrick, making a sudden turn to the northwards, forms a commodious harbour near the town,—a favourite rendezvous of the herring-fleet in the early part of the season\*.

St. Patrick's Isle is in extent about five acres, being simply a prolongation northward of a small spur of the Horse Hill, which on the opposite side of the river commands the town of Peel. It consists of the ordinary clay-schist of the neighbourhood, having the usual north-west-erly dip of this side the mountain. Within its small area it contains the ruins of the venerable cathedral of St. Germanus, of the still more ancient church of St. Patrick, a fine specimen of a round tower, and the remains of other buildings, ecclesiastical as well as civil, of which the age and uses are in many instances extremely doubtful. The

\* For an account of the Herring Fisheries, see Appendix, L.



whole area is surrounded by embattled walls four feet thick, built of mixed fragments of clay-schist and the old red sandstone of the immediate neighbourhood, flanked here and there irregularly with towers. The erection of these walls may well be attributed to Henry, the third Earl of Derby, in 1593\*, probably under the direction of his son the Hon. William Stanley, who was that year Captain or Governor of the Isle, and afterwards Earl of Derby†. In more ancient times insular position was considered (at least by the Celtic races) a sufficient defence; nor is it improbable that some reliance was placed on the hallowed character of the little isle itself. The island is *now* joined at its southern extremity with the mainland by means of a strong stone causeway, erected within the last century as a breakwater to secure the harbour from westerly gales.

In the midst of the green sward, which now has over-spread nearly the whole of the area within the walls, and forms a short, sweet pasturage, is a pyramidal mound of turf, of a rectangular form, facing the four cardinal points, and measuring about seventy yards along each side. The

\* Bishop Wilson states (History, p. 355) that *Thomas* Earl of Derby encompassed it with a wall and other fortifications; but an order (preserved in the *Lex Scripta* of the Isle of Man) dated February 18th, 1593, issued from Lathom House, directs that the two garrisons of Castle Rushen and Peel should be again erected. If fortifications had previously existed at Peel, they were destroyed by Robert Bruce in 1313. The manner too in which the walls of the fortress join on to St. German's Cathedral, show them to be certainly posterior to that building. Simon would never have built his beautiful chancel to range evenly with, and form part of, the walls of a fortress.

† He received from James I. a fresh grant of the island, on terms equally liberal with those granted by Henry IV. to his ancestor Sir John Stanley in 1406. This grant was confirmed by the English Parliament, A.D. 1610.

angles have well-nigh disappeared, and it presents but the rude outline of its ancient proportion. It seems to have been an old Danish fort, thrown up probably about the beginning of the eleventh century\*.

Close by this mound, perched on the highest point of the island, rises the Round Tower, with its antique masonry almost wholly of the old red sandstone, regularly laid in courses of long and thin stones with the wide jointing filled in with coarse shell-mortar of extreme hardness. It is in every respect similar to those of Ireland, so admirably described by Mr. Petrie†; and its position, a little to the north of the ruined church, seems to tally remarkably with the view which he has taken of the double purport of these buildings, as belfries and as keeps or places of strength for the protection of sacred utensils, books, relics, and other valuables, and into which in cases of sudden attack the ecclesiastics to whom they belonged might retire for security. There is a little door facing the east at the lower part of the tower, six feet nine inches above the ground, to which access seems to have been gained by a ladder; four small square-headed apertures near the top face the cardinal points, and one other is seen lower down on the north-west or seaward side‡.

\* Mr. Grose, in his "Antiquities of England," vol. iv., gives it as his opinion that "from this eminence the commanding officer harangued his garrison." Mr. Train believes this to have been the hill named Santwart, or Saint-hill, mentioned in the "Chronicon Manniæ" as the spot where the great battle was fought between Reginald and Olave in 1098.

† See the Ecclesiastical Architecture of Ireland, &c., by George Petrie, R.H.A. vol. i. Dublin, 1845.

	ft.	in.
‡ Circumference of the Tower near the base ...	44	6
Internal diameter at the door.....	5	9
Height of the Tower about .....	50	0

But the great point of attraction is the venerable Cathedral\*, on the south-eastern side of the isle.

St. Patrick, on his departure from the Isle of Man in 447, left behind him Germanus, a holy and prudent man, "ad regendum et erudiendum populum in fide Christi," says Jocelinus†. This was sixty-nine years prior to the foundation of the See of Bangor, and one hundred and fourteen before the mission of St. Augustine. Here then we stand upon the vestiges of the Cathedral-church of the most ancient existing See of the British Isles‡. But of the original church of St. Germanus not a trace, as far as we can point out, remains. The building, of which we see here the ruins§, is cruciform, and was begun by Simon, who became Bishop of Sodor in 1226. His work is plainly the chancel: its style is early English, with somewhat of an admixture of Norman character. It corresponds in the main with the architecture of the Cathedral-church at Drontheim, and is interesting in this view on account of the known connection of this See of Man and the Isles with that Archiepiscopate||.

The central tower, which is square and has a long square staircase-turret, rising to a height of sixty-six feet at the south-western angle, is evidently of a somewhat later date, though the chancel arch is early English. The north arch of the tower is early decorated, and the south arch somewhat later, as is also the western arch. The transepts are also

\* A detailed account of the Cathedral of St. Germanus will be found in a highly valuable paper, by the Rev. J. L. Petit, in the *Archæological Journal*, No. 9, p. 49.

† Sacheverell's *Survey of the Isle of Man*, p. 109.

‡ It must be borne in mind that St. Patrick was on his way to Ireland, where he founded the See of Armagh, when he left Germanus in the Isle of Man.

§ Bishop Hildesley was the last bishop enthroned in this Cathedral.

|| The Bishops of Sodor and Man obtained their consecration from the Archbishop of Drontheim for many generations.

of a decorated character, though with later insertions. The south transept has a western door, and near it a niche for holy water, and over against it on the opposite wall is a bracket for an image\*.

The nave is of ruder workmanship throughout. It would seem to have had a south aisle, the piers and arches of which have been built up and later windows inserted, though it is not altogether improbable that the piers may have been originally incorporated in the wall with a view to the future enlargement of the building by the addition of the south aisle.

The battlemented character of the central tower, with the north and south transepts, is very remarkable, as presenting a combination of military and ecclesiastic purposes in the same building. It is both a cathedral and a fortress, though this does not appear to have been originally intended by Bishop Simon when he built the chancel. Under the chancel is a fine crypt, thirty-four feet by sixteen. A series of arched ribs springing from thirteen short pilasters support a pointed barrel vault: the entrance to it is by steps within the thickness of the south wall of the chancel, and

\* The following are the dimensions of the building, as taken by Mr. Petit:—

	ft.	in.
Internal length of chancel .....	36	4
length of nave .....	52	3
tower from east to west .....	25	11
Total length inside .....	114	6
Length of north transept (inside) .....	20	4
Ditto south transept .....	22	0
Total width at intersection .....	68	3
Width of chancel and nave.....	20	1
Ditto north transept .....	19	10
Ditto south transept .....	18	8
Height of chancel-wall and of nave .....	18	0
Thickness of the walls about .....	3	0

it is lighted by a small aperture under the chancel east window.

Shakspeare, in the second part of his play of Henry the Sixth, has made allusion to the Isle of Man as the place whither "dame Eleanor Cobham, Gloster's wife," should after three days' penance be sent to live "in banishment with Sir John Stanley." He, or the author from whom he has borrowed the substance of the second and third parts of that play, are clearly guilty of an anachronism in thus bringing together these two personages. From the events detailed at the commencement and end of that part of the play, the period occupied by it lies between the years 1445 and 1455, but Sir John Stanley had died in 1432, and was succeeded by Thomas, who appears hardly to have resided at all on the Isle of Man, being for a period of more than six years engaged as Lord Lieutenant of Ireland, and afterwards for five years one of the commissioners for the defence of Calais. The fact however of the confinement and death of the Duchess within the walls of Peel Castle is generally allowed, and this crypt under the chancel of the cathedral is pointed out as her prison-house.\* They tell you, says the marvellous-loving Waldron, that ever since her death to this hour a person is heard to go up and down the stone staircase of one of these little houses on the walls constantly every night as soon as the clock strikes twelve. The conjecture is that it is the troubled sprite of this lady, who died as she lived, dissatisfied and mourning her fate†.

\* In later years, even down to the episcopate of Bishop Wilson, this crypt seems to have been used as the place of confinement for persons guilty of offences coming under ecclesiastical censure, such as incest and adultery.

† Description of the Isle of Man, p. 110. "In the reign of Henry VI. among the friends of Humphrey, Duke of Gloucester, his Duchess, Dame Eleanor, was arrested. Roger Bolyngbroke, a man expert in necromancy, and a woman called Margery Jourdain,

Dame Eleanor was not the only state prisoner confined within these sea-girt walls. We read of Thomas Earl of Warwick, in the reign of Richard II., being banished hither, probably through the influence of Sir William Scroop, afterwards Earl of Wiltshire, who was at this time king of Man, having purchased the island from Sir William Montacute, Earl of Salisbury. On the downfall of Richard his favourite the Earl of Wiltshire\* was beheaded, and the Earl of Warwick was set at liberty by the Duke of Lancaster, afterwards Henry IV. In after-times we have notice of Edward Christian (who had been lieutenant-governor of the isle, and whom Sir Walter Scott seems to have confounded with his nephew William Dhone,) being confined a prisoner here by the Earl of Derby. And if these state-prisoners had liberty of range of the entire circuit of the isle, 't were no very miserable confinement, as far as scenery at least is concerned. There to the south rises the noble Horse Hill with its notable land-mark†; a bold coast sweeps onwards to Contrary Head; the eastern side of the hill has a fine rounded swell forming a choice sheep-walk; then at its base comes the silvery Neb rippling over its gravelly bed adown a verdant valley, where grassy

surnamed the Witch of Eye, were charged with having at the request of the Duchess of Gloucester devised an image of wax like unto the king, the which image they dealt so with that by their devilish sorcery they intended to bring the king out of life, for the which reason they were adjudged to die."—Falgan's Chronicle, p. 394.

\* The following are the terms of the record of sale of the island to Sir William Scroop:—"Wilhelmus le Scroop emit de Domino Wilhelmo Montacuto Insulam Euboniæ id est Manniæ: Est nempe jus ipsius Insulæ, ut quisquis illius sit Dominus, Rex vocetur, cui etiam fas est Coronâ aureâ coronari."—See Sacheverell's Account of the Isle of Man, p. 72.

† Corrin's Folly (as it is usually called) is said to have been erected by a farmer of Peel as a mausoleum for his "gude wife."

slopes are here and there interrupted by clumps of trees and studded with neat villas. The vale in which stands the parish church of St. Patrick spreads out far southward, and is embayed in the majestic amphitheatre of mountains which form the continuation westward of the ridge of Slieauwhallin. The South Barrule chain peeps up at various points beyond. Far to the eastward we look up the St. John's Valley, and here and there catch sight of the different mountain-crests which hedge it in and give such a rich diversity to the Glenfaba sheading. There is a lower chain in front towards the north-east which sweeps round from Rock Mount towards the coast near Lhergydhoo and Ballanayre. It consists of clay-schists which have been tilted on an axis\* by an intrusive mass of hornblende rock, of which the outburst may be seen by the road-side, where it passes at the southern termination of the range from the Peel side down into the lovely Rennass valley. There is every reason for believing this upheaval to have been posterior to the Carboniferous æra, for it appears to have tilted also the old red sandstone of this neighbourhood to a high angle, and there is no evidence whatever of any disturbance of the area between the old red and the carboniferous limestone. It is very unfortunate that the whole line of junction of the schists and the old red sandstone in this neighbourhood is covered up by the tertiary gravels and clays except at the point where they come out together on the sea-coast, and here all the beds are so shattered by intrusive masses of igneous rock that we can learn nothing of their history in connection. Northward beyond this point the shore loses its bold character, and the fine sweep of Kirk Michael Bay and the further reach to Jurby Point, thirteen miles from Peel, presents, by its

\* See Plate I., Section across the island.

remarkable terrace-like appearance, a singular contrast to the nearer mountain scenery. The transition from the primary to the tertiary strata, and the character of the drift-gravel platform as a raised sea-beach, is nowhere more distinctly marked.

On a remarkably clear day the view which the Irish Sea presents to us on looking out over the ruined battlements of Peel Castle is that of a large inland lake, the Scotch and Irish coasts seem so completely to embay it. Burrow Head, in the south of Scotland, seems but a continuation of the land beyond Jurby Point. Luce Bay runs far inland, and its head cannot be seen, but the Mull of Galloway comes stretching down again towards us from the blue distance westward and southward; and then again the coast-line from Belfast Lough and the Copeland Isles to the mouth of Lough Strangford, and so on to Ardglass and Dundrum Bay, shuts up the scenery to the far west. And then southwards of Dundrum Bay the Mourne mountains rise up again with imposing magnificence and run far enough down the channel to be shut up by Contrary Head, which is but a mile or two off.

But the picture is not complete without taking in the ancient-looking town of Peel, which will remind northerners of some of the Highland sea-side towns built upon this same old red sandstone. It may be, after all, a question whether or no Peel itself does stand upon the old red sandstone, or whether the schist on which Peel Castle stands passes under the river and actually underlies the drift-gravel and boulder-clay, in which the foundations of the houses of the town are dug. Perhaps the Coal Company of Peel will undertake to solve the question by their borings in this neighbourhood! The old red sandstone however comes out finely from under the tertiary beds a couple of hundred yards north of the town, and presents a



bold cliff to the westward and southward, though the sea has made great inroads upon it, and has dug out a fine series of caves and romantic gullies all along the coast where it is exposed. These gullies are a favourite resort of pebble-seekers\*. At the base of them, generally speaking, is a fine gravelly beach, on which a little careful searching will discover madrepores, grey and red cornelians, agates and jaspers; the former have been broken off from the carboniferous limestone, which there is every reason to believe lies exposed a few hundred yards from the shore; the latter have either been washed out of the old red conglomerate and primary rocks of this neighbourhood, or may have come from the washing of the drift-gravel by the mountain streamlets which cut their way through it and bring down with them alluvial deposits into these gullies. Yet these things could, after all, have no interest in the eyes of the lonely prisoners in Peel Castle. Had Fenella been a reality (as the guide, who shows the sally-port where she is said to have been last seen, gravely assures us), we might well fancy her fairy steps tripping along the gravelly beach, and ever and anon snatching up the sparkling pebbles which the last tide had cast at her feet. But for the rest, kingdoms were the baubles which glistened in their eyes, and one of them at least was so successful in the pursuit as to gain for himself the title of the King-maker.

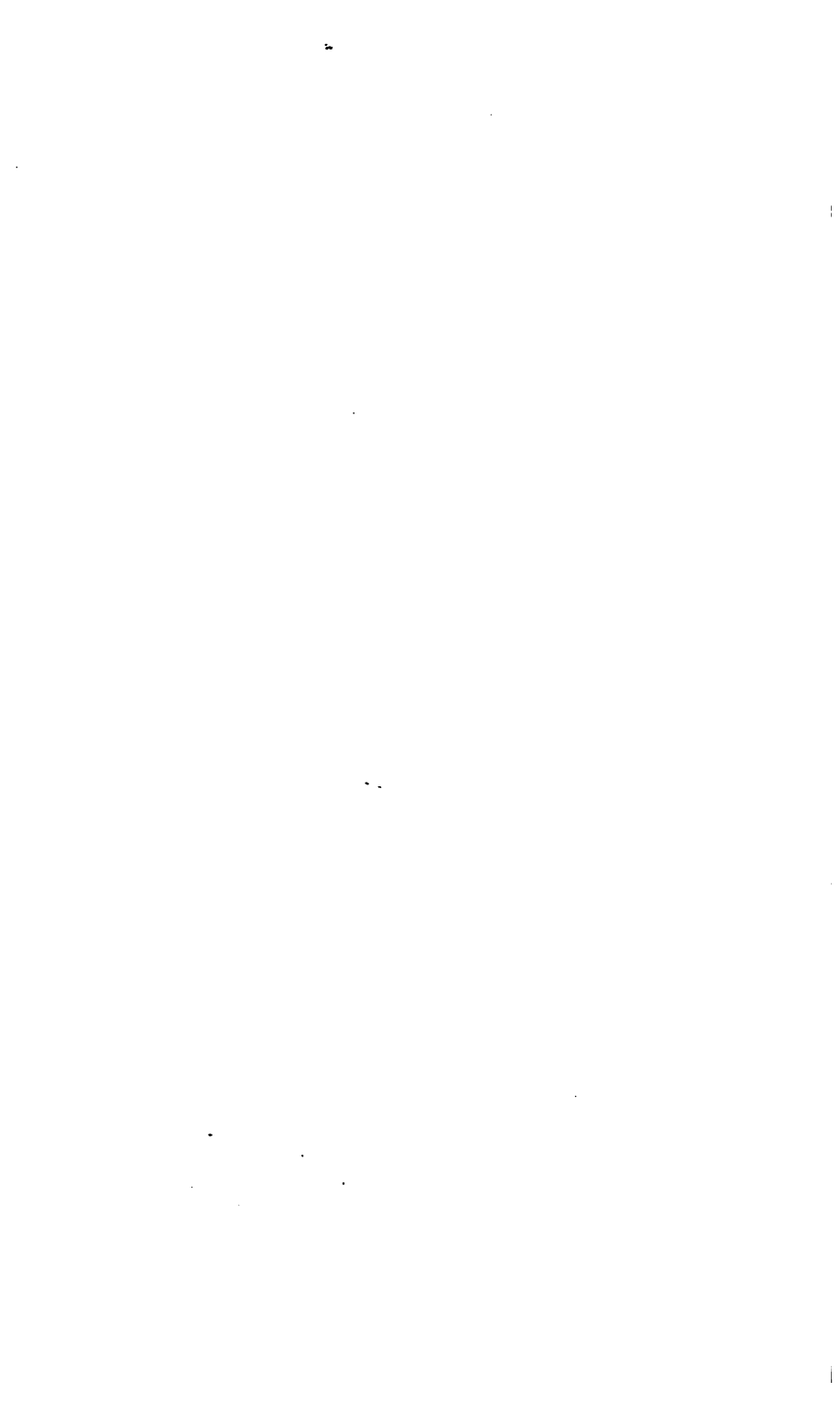
We descend from the Cathedral to the guard-house hard by the ancient gateway. Though one of the latest-erected portions† of the Castle, and solidly built, decay

\* The White Strand about a mile northward of Peel is particularly noted.

† "The tower, and other parts of the castle about the entrance, which is south of the Cathedral, seem to belong to the early part of the fourteenth century; the masonry is strong and careful, though



*Del. Castle and Town from Crisp Head.*



has set its cold grasp upon it; the dew-damp rests upon the walls which of old echoed with the soldiers' mirth, and the hearth which blazed brightly is now desolate and black. But the Wizard of the North has thrown an air of enchantment over it which will endure till the notes of the last minstrel's lay have ceased to sound\*.

The story of the spectre-hound or black dog of Peel Castle is thus told by Waldron†:—

“They say that an apparition, called in their language the *Moddey dhoo*, in the shape of a large black spaniel, with curled shaggy hair, was used to haunt Peel Castle, and has been frequently seen in every room, but particularly in the guard-chamber, where, as soon as the candles were lighted, it came and lay down before the fire in presence of all the soldiers, who at length, by being so much accustomed to the sight of it, lost great part of the terror they were seized with at its first appearance. They still however retained a certain awe, believing it to be an evil spirit which waited to do them hurt, and for that reason forbore swearing and all profane discourse while in its company. But though they endured the shock of such a guest when all together, none cared to be left alone with it. It being the custom therefore for one of the soldiers

not very regular, and the blocks of stone larger than those used in other parts of the building.”—The Rev. J. L. Petit, in the *Archæological Journal*, Part 9.

\* But none of all the astonish'd train  
Were so dismay'd as Deloraine;  
His blood did freeze, his brain did burn,  
'T was fear'd his mind would ne'er return;  
For he was speechless, ghastly, wan,  
Like him of whom the story ran  
That spoke the spectre-hound in Man.

Scott's *Lay of the Last Minstrel*.

† Description of the Isle of Man, 1731.

to lock the gates of the castle at a certain hour, and carry the keys to the captain, to whose apartment the way led through a church, they agreed among themselves, that whoever was to succeed, the ensuing night, his fellow on this errand should accompany him that went first, and by this means no man would be exposed singly to the danger, for the *Moddey dhoo* was always seen to come out from that passage at the close of day, and return to it as soon as the morning dawned, which made them look upon this place as its peculiar residence.

“ One night a fellow being drunk, and by the strength of his liquor rendered more daring than ordinary, laughed at the simplicity of his companions ; and though it was not his turn to go with the keys, would needs take that office to testify his courage. All the soldiers endeavoured to dissuade him ; but the more they said the more resolute he seemed, and swore that he desired nothing more than that the *Moddey dhoo* would follow him as it had done the others, for he would try whether it was dog or devil. After having talked in a very reprobate manner for some time, he snatched up the keys and went out of the guard-room. In some time after his departure a noise was heard ; but nobody had the boldness to see what occasioned it, till the adventurer returning they demanded the knowledge of him ; but loud and noisy as he had been at leaving them, he was now become sober and silent enough ; for he was never heard to speak more ; and though all the time he lived, which was three days, he was entreated by all who came near him either to speak, or if he could not do that, to make some signs by which they might understand what had happened to him, yet nothing intelligible could be got from him, only that by the distortion of his limbs and features it might be guessed that he died in agonies greater than is common in a natural death. The *Moddey*

*dhoo* was however never seen afterwards, nor would any one attempt to go through that passage; for which reason it was closed up and another way made. This accident I heard attested by several, but especially by an old soldier, who assured me that he had seen the *Moddey dhoo* oftener than he had hairs on his head."

Our journey to the north of the island from Peel may be made either by the coast-line or by the more inland route through the Rennass valley. This latter is much the further of the two as respects distance, but it has so many beauties peculiarly its own, that the general tourist in making the detour will find himself amply repaid; and if he has time at his disposal, he may be induced perhaps still farther to lengthen the journey by following the valley and the stream beyond the point where the road to the north turns up Craig Willie and passes by Cronk-y-Voddey\*. The continuation of Glen Helen in the direction of Little London beyond this point, is not in itself so striking as the more southern portion of the valley which the high road traverses. Its chief interest is derived from the Rennass waterfall and the wildness of the scenery around the spot where the waters fret and tremble, then dash onwards over the jagged edge of rock, and pour their whitened volume into the seething caldron below. But to this fall there is no carriage-road as yet, and the distance of a couple of miles thither and back from the highway† must be made on foot or horseback.

\* Cronk-y-Voddey, *the hill of the dog*. It will be observed that according to the genius of the Manx language, the *m* at the beginning of the word *moddey* dog is, in a state of construction, changed into *v*. See Appendix, M. "On the Manx language."

† We cannot speak of turnpikes in the Isle of Man, as no tolls are taken upon the highways, which are kept up chiefly by a tax of ten shillings per annum upon each pair of wheels of any vehicle.

It would after all, perhaps, be more desirable to make this point the object of a separate visit from Douglas, and the excursion might then include a peep into Glen Darragh (the Vale of Oaks), where is a (so-called) Druidical temple in good preservation, the Mona Mine of Ellersley on the Bishop's barony, and the ruins of St. Trinian's Chapel\* on the road-side near Crosby. The pedestrian or horseman having visited these places and the Rennass waterfall, might return to Douglas by the Baldwin valley, by taking the pass across the mountain between Sartel and Greebah.

The coast-road from Peel to Kirk Michael lies, except at one point, wholly upon the terrace of the drift-gravel, descending however in several places into the deep narrow valleys, which have been eroded in the drift partly by the action of the mountain streamlets and partly by that of the sea when the land was more depressed than it now is. These valleys are extremely picturesque, often well-wooded, studded over with cottages, opening out into the sea at the lower extremity with a fine alluvial terrace, and at the upper backed by some fine sweep of the mountain-range. They offer to the geologist peculiar facilities for the study of the pleistocene series, as well as several points of interest connected with the disturbances of the palæozoic rocks, and he will therefore almost necessarily adopt the coast-line in his journeyings†.

\* This parish seems to abound in ruined oratories. There is one on the estate of Balla Crink, another at Balla quinnay-mooar, a third at Balla-lough, and a fourth at Ballingan.

† In following the coast-line northward from Craig-Mallin, he travels through the beds of the old red sandstone in the ascending order. The upper portion is greatly charged with carbonate of lime, and effervesces strongly with acids. It contains characteristic Devonian fossils, such as *Favosites polymorpha*, though there is every probability that it passes very soon into the lower carboniferous

A description of Glen Willan, which is but a few hundred yards southwards of the point where the coast-road and the inland road unite near the Mitre hotel and the Ecclesiastical Court-house of Kirk Michael, will serve as a sample of all the other glens which have been excavated in the pleistocene series.

The road from Peel to Kirk Michael is carried across the lower part of Glen Willan by an embankment, with a bridge of a single arch in its centre, which permits the egress of the waters brought down from Slieaudhoo and Slieau-ny-fraughane. At the western extremity of this embankment a rustic gate admits to a winding path along that side of the valley towards the sea. A prominent point about 300 yards down presents itself to the artist as the proper station for taking a sketch. The foreground consists of the sloping banks which skirt either side of the purling streamlet with a profusion of broom, eglantine, gorse, daisies, primroses, veronicas and white campanelles. The sides of the valley incline at an angle of  $40^{\circ}$ , and its breadth at the bottom averages about 150 yards. Look upwards inland in a direction S.S.E. —how exquisitely grouped are the cottages and trees by the mill and the rustic bridge! A fine section is presented of the drift-gravel platform by the road-cutting in the north-eastern escarpment. We have atop about twenty-five feet of very

series of the island. Whether the limestone which supplied the kilns about a mile north of Peel was simply a band of corn-stone in the Devonian series, or a true limestone of the Carboniferous age, there are hardly sufficient data to determine. At the mouth of the streamlet (Claveg) which runs down from Lhergydhoo, the old red sandstone is seen to rise on a bold undulation which in the next creek northwards is shown to have been caused by the protrusion of the mass of igneous rock which cuts off the Devonian beds to the north-east of a line hence to Rock Mount.



coarse gravel\*. This rests on a great thickness of fine sand, which passes into the loamy sand of the boulder formation. To the right is a rounded range of low hills of this formation, rising nearly 100 feet above the level of the drift platform. We have a magnificent view of the mountains beyond,—Sartel, Slieau-dhoo, Slieau-ny-fraughane and Slieau-hearne. The clouds flit across their summits and cast down creeping shadows into the ravines and along the verdant slopes.

If we turn round again to the north, and look out at the opening of the valley towards the sea, we trace the windings of the stream in the low alluvial flat, and beside it fishermen's cots, with the usual concomitants. The cattle stray upon the very verge of the cliff. The black-cap and sparrow twitter in the gorse. The lark rises up aloft from the gravel terrace, and at heaven's gate sings; whilst the plover whirls around in mazy eddies with well-feigned anxiety about that corner of the field which is furthest off from the spot where she has deposited her four brown speckled eggs. The nearer murmur of the stream mixes with the farther-off dash of the breaker on the shore, and the wild cry of the curlew which sweeps by the mouth of the glen with the cackling of the geese which are nibbling the short herbage a little higher up.

Beyond, afar off, over the deep blue wave, the Mull of Galloway and Burrow Head are seen embracing Luce Bay; the sand-hills about Bishop's Court hide the rest of the Scottish coast. Here we have Kirk Michael close at hand, spreading out towards the mountains, but clustering round the modest church and the grave-yard where rests the earthly tabernacle of the holy Thomas Wilson. The humble palace where he dwelt during the half-century of his epi-

\* See Plate VIII. and the explanation of it.

scopate lies in the wooded glen beyond, and the tallest of the trees which we catch sight of there are said to have been planted by his hand. Let us remove and take a nearer view of these different objects.

Kirk Michael Churchyard has some points of interest which may cause us to loiter awhile within its precincts. Those old Runic monuments at the gateway indicate that for at least 800 years this spot has been the resting-place of the ancestry of the tenants of this ecclesiastical village; and they indicate that the persons to whose memory they were erected professed themselves Christians, which the more recent headstones might not perhaps lead us to conclude of the tenants of the graves beneath them. Yet the inscriptions of the more ancient stones are almost wholly hieroglyphic. This much however we can learn of the owner of one of them, that he was a Nimrod in his day, a mighty hunter as well as warrior. The animals of the chase as well as the beasts of the field are sculptured alongside of the figure of a warrior bearing his javelin and shield\*.

\* This Runic monument, which stands just outside the churchyard gate, is in very good preservation: It is 7 feet 4 inches in height, 20 inches wide and 5 inches thick, of the blue clay schist of Spanish Head. The inscription is cut in Runes along the edge of the stone, and has been as usual variously read and interpreted.

Sir John Prestwich read it (as given in Bishop Wilson's Life by Crutwell)—“Jualstr! : Ujnr : Thurulf! : Ein! : Rautha : Ri! Ti! Kru! : Thono : Aft : Frithu : Duthur! : Jao :” and he translates it thus: “Walter son of Thurulf, a knight right valiant, Lord of Frithu the Father Jesus Christ.” There is no doubt of this being incorrect; the reading, in fact, is not consistent throughout. Mr. Train (*‘Isle of Man,’* vol. ii. p. 36) gives the following as the reading and translation of Mr. Just, of Bury, Lancashire:—“Voalfar : Sunr : Thurulfs : Eins : Rautha : Rasti : Krus : Thono : Aft : Frithu : Muthur : Sino :”—“Voalfar, son of Thurulf the Red, raised this cross for Frithu, his mother.” A view of this stone is given in the *Archæological Journal*, vol. ii. p. 76; and in *Kinnebrook's Runic Monuments of the Isle of Man.*

And we seem to have proof before us that since that time a change has taken place in the class of animals which must be considered upon the isle as *feræ naturæ*. The deer tribe was game in those days. But even the laws of Howel Dha could avail nothing against the advance of agriculture and civilization, and the area of the Manx mountains, even if placed altogether within a ring-fence, is much too circumscribed for the rambles of the cervine race\*.

Another of these Runic monuments standing on the wall to the north of the gateway, in good condition, contains also amongst other devices that of a stag, and a figure apparently playing upon a harp. The churchyard is rich in these remains (there are five altogether), and they form a beautiful link in the chain of monumental history. We have first of all rude uncarved blocks and pillars frequently placed in a circle, as the Cairn Vichael in this parish; then these elaborately wrought crosses, with their singular Runic inscriptions and strange devices; we have then the coped coffin-lid, such as that preserved at Rushen Abbey; of sepulchral brasses, there are no recorded samples in the Isle of Man; lastly, we see the miserable, unmeaning, and too oft unchristian productions of the last two centuries, standing up a dense black crowd in every churchyard around.

Yet there is a recent monumental erection in the graveyard of Kirk Michael which may well excite attention. The parish-register says,—“The Right Reverend Father in God, Dr. Thomas Wilson†, Lord Bishop of Sodor and Man, buried near the east gable of the church, March 11th,

\* An attempt was made by James the seventh Earl of Derby to preserve deer upon the Calf Islet, but without success, as they swam across the Sound.

† For an account of Bishop Wilson, see Appendix, N.

1755." Directing thither our steps, not to the east end of the present church, but of the old one, of which the gable has been preserved, we find a plain tomb railed in with iron, and bearing the following inscription\*: "Sleeping in Jesus, here lieth the body of Thomas Wilson, D.D., Lord Bishop of this Isle, who died March 7th, 1755, aged 93, in the 58th year of his consecration. This monument was erected by his son Thomas Wilson, D.D., a native of this parish, who, in obedience to the express command of his worthy father, declines giving him the character he so justly deserves. Let this island speak the rest."

If that appeal be made now, what must be the answer as far as the Church is concerned? Bishop Wilson, in speaking of the general readiness with which ecclesiastical censures were submitted to in his episcopate, gives as one reason that there was no professedly Christian community besides the Established Church to which excommunicate persons might betake themselves; and in his 'History of the Isle of Man' he states that, excepting a family or two of Quakers, Dissenters of any denomination there were none. Such also is the testimony of his successor Bishop Hildesley when writing to the Archbishop of York in 1762†:—"The adult natives, to a man I think I may say, are conformists to the established communion of the Church, and so exact and punctual for the most part‡ in their attendance on the public offices of divine worship (there being no less than 600 at the communion in a country parish church at Easter), that there is little or no occasion for presentments on this head."

\* In the same churchyard we find the graves of his successors in the episcopate, Hildesley and Criggan; the former died in 1772, aged 74; the latter in 1813.

† See Butler's Life of Bishop Hildesley, p. 418.

‡ For the discipline and order of the Manx Church, see Appendix, O.

What is the position of church matters now? Almost within the short space of the mile which intervenes between the churchyard where Bishop Wilson is interred and the palace where he lived are two meeting-houses \*, filled each succeeding Sunday with parishioners zealously attached to Wesleyanism in its different connections. And such is pretty generally the case throughout the island. The meeting-houses outnumber the parish churches in the proportion of four to one, and the congregations assembling within each respectively are very nearly in the same proportion. Yet the people are not hostile to, though alienated from, the Church, and there is far more hope of their restoration to the conformity of their fathers than is the case with the Separatists on the other side of the water. And it is perhaps not too much to say, that the remembrance of the great benefits, temporal as well as spiritual, conferred upon this isle by the bishops of the Church, foremost amongst whom stands, and will ever stand, the holy and apostolic Wilson, has contributed very largely to keep up the feeling which doubtless still exists in the minds of the great mass of the population, that the Established Church is their church, and that it is a real blessing to the isle.

\* One of them is a few hundred yards to the south of the church gates.

## CHAPTER XIV.

Bishop's Court.—The Grounds.—The Chapel.—Orry's Head.—Probable continuation of limestone series in the north of the Island.—Formation of the Curragh.—Ballagh.—Jurby.—Megaceros marl-pits.—Use of marl.—Overthrown ancient forests.—Ancient lakes.—Legend of Mirescogh.—Sulby Glen.—Snaefell.—The Bride Hills.—Admiral Thurot.—The Ayre.—Point Cranstal.—Grand development of Boulder series.—Ramsey.—Ballure Glen.—Sky Hill.—Port-le-Voillen.—Kirk Maughold.—The Holy Well.—Vision of Gil Colum.—The Dhoon granite.—Laxey.—Orry's Cairn.—Cloven Stones.—Return to Douglas.

THE demesne of Bishop's Court consists of (very nearly) one square mile of glebe. There is a peculiar charm about it in the contrast of its richly wooded glen with the openness of the surrounding country, and the magnificent pile of mountain which rises up from it in one continuous verdant slope towards the east. There is a repose upon the spot which specially suits its character as the residence of a Christian Bishop\*.

The palace itself is in perfect keeping; Bishop Wilson's description still holding good, in which he speaks of it as "a good house and chapel (if not stately, yet convenient enough), large gardens and pleasant walks, sheltered with groves of fruit and forest trees." When he came to it he beheld it sadly fallen to ruin†, the bishopric having been

\* For a catalogue of the Bishops of Sodor and Man, see Appendix, P.

† The date of the original palace is not known, though there is no doubt of its being extremely ancient. It is said to have been a castellated building, and that one part of it had the name Orry's

vacant five years; but with his characteristic energy, he immediately commenced a substantial restoration; and though very valuable improvements have since been made, the substance of the present building may still be considered his. In the grounds, the avenue of elm-trees (now thickly hung with ivy), which closes in the northern extremity of the lawn, is always pointed out as the planting of the earlier days of his episcopate, and a favourite promenade in the later\*. Here, walking one cold damp day, after evening prayers, in the ninety-third year of his life and the fifty-eighth of his consecration, he caught that cold which terminated his earthly labours, and permitted his longing spirit to enter into the rest of that Paradise where he enjoys the blessed society of just men made perfect.

The chief additions and improvements made to the palace and grounds since his day have been under the direction of Bishops Murray and Short. The former rebuilt the chapel, which the latter again refitted. The chair on the north side of the holy table is a relic of Bishop Hildesley, and on convocation-days the chair of the venerable Wilson is brought out and occupied by the Bishop, whilst in conference with his assembled clergy.

The parishes of Kirk Michael and Ballaugh each of them claim a share in Bishop's Court, as the streamlet which winds down the glen in which it is situated forms the boundary between the two. Following this streamlet upwards towards the mountain, we catch through the trees

Tower, and was surrounded by a ditch. We have historical evidence of its having been occupied by Bishop Simon in 1230.

\* His coffin was made of the wood of one of the elms which he had planted on his arrival upon the island, and which he caused to be cut down and prepared for the purpose a few years before his death.

here and there lovely glimpses of the country far and near, the Scotch and Irish coasts ever on a clear day presenting their faint blue outline on the extreme verge of the horizon.

Downwards the stream leads into Orry's Dale and towards Orry's Head. Where the former begins to open out to the sea, we fall in with a limekiln; where is the limestone? The boulders of limestone have been found in sufficient quantities along the shore to make it worth while to collect them for this purpose, owing to the difficulty and expense of conveying lime from the southern to the northern portions of the island. Whence have these boulders come? They tumble out of the boulder-clay which is developed very finely along the entire coast, from Kirk Michael to Jurby Point, in the cliffs rising from 50 to 150 feet above the level of the sea.

The rake of the tide sweeping powerfully down the Irish Channel falling upon this coast, composed as it is of loose materials of sand, loam and boulders, pulls down continually vast masses from the cliffs, and bears away the finer portions as its spoil. The boulders left behind are chiefly granites, syenites and porphyries, quartz-rock, clay-slate, old red conglomerate, limestone, and a few chalk-flints. Whether the last, which must have come from the north of Ireland, belong to the boulder formation, or are truly found only in the drift-gravel, I have not yet seen any determinate evidence.

Let us examine the limestone boulders. Some of them have a deep reddish tinge, and look like a passage-rock from the old red sandstone into the lower limestone; the contained fossils are chiefly corals, madrepores and tubiporites; others again are comparable to the dark limestone of the south of the Isle of Man in lithological character and organisms, and we fall in also with some containing the characteristic fossils of the upper or Poolvash limestone.



Now as we have at Peel very plainly the Old Red series of considerable thickness dipping down into the sea westward and north-westward, it is very reasonable to conclude that the basset edge, both of it and of the different beds of the superior limestone, curves round to the northwards, and passes under the northern area of the Isle of Man; so that it would be by no means a rash speculation at various points in the northern parishes, at the distance of from three to four miles from the mountains, to bore through the pleistocene series with the expectation of falling in with the much-sought-after, and in this neighbourhood specially valuable, limestone. To make such an excavation would evidently not be money altogether thrown away (as in all attempts to find coal in the south and centre of the island), for the excavated materials, all the way down to whatever rock we might happen to come to, being the very marl which is so largely used upon the sandy lands of the north, would evidently pay a large portion of the expense of the trial. The subjacent rock might be expected in some places, such as along the northern edge of the Curragh, at from 60 to 100 feet below the surface; it might even be less than this\*.

Whilst it is evident that we must look to the south of Scotland as the chief origin of the granites, porphyries and syenites which we meet with in the boulder-clay of the north of the Isle of Man, it is not altogether improbable that the limestone, old red sandstone and schist boulders may some of them have a more local derivation. Under the impression that the coal beds which dip down into the

\* In the year 1839 borings were made for coal at the Craig near St. Jude's church; the following is stated to have been the result: five feet sand, twenty-seven feet blue marl, two feet gravel, twenty-seven feet blue marl, and then sand. The boring was not proceeded with any deeper.

sea at Whitehaven, and are wrought to some distance under it, come up again between that coast and the north of the Isle of Man, I have often sought for some fragments of the coal-measures amongst these boulders, but hitherto without success.

From the mouth of Orry's Dale a fine range of sand-hills sweeps round to Ballaugh, and in passing along them we gradually bring within sight the entire expanse of the northern plain country, constituting an area of fifty square miles. It is a scene which may perhaps remind us of some portions of Norfolk, where we meet with the next greatest development of the pleistocene series in the British Isles south of the Clyde.

At our feet lies the straggling village of Ballaugh, one moiety of which clusters round the old church near the sea-shore; the other seems to have drawn upwards and inland towards the high road which bends round the base of the mountains, and has a new church erected for greater convenience of access.

That lovely valley south of the village, down which the river comes rippling, is Ravensdale, and contains within itself some exquisite wild scenery; at its head there is a fine pass over the mountains into Druidale and the south of the island.

Ballaugh clearly stands on the platform of drift-gravel. If we look out northward and eastward, the eye roams over a low swampy country, the fen-district of the island, of which the local name is the Curragh. It occupies, as we may see, a depression in the drift-gravel several miles in extent, the further bank extending in a curved line from near Jurby Church towards Andreas. We may compare it to a great inland lake fringed round with gravel-banks. Such in fact at one time it was, but the lake has been gradually

drained and filled up with montane alluvial deposits\*, and layer after layer of turf has accumulated in the damp hollows, sometimes to the depth of thirty feet, and reduced the whole to one level surface, which by burning and top-dressing with the marl† of the neighbourhood has at length been brought to bear the plough and to yield a good return for the expended capital.

Jurby Church stands out a very conspicuous object on the higher ground near the headland. The name is

\* Bishop Wilson mentions the occurrence of a layer of peat three or four feet thick under a bed of gravel, sand and clay of some miles in extent. At one time I thought that he referred to some locality which had been inundated from the sea. I am now inclined to the belief that the gravel, &c. is the result of montane detritus, which has been spread out over the peat by the change of a river-course or some similar cause.

† The advantage derived from the marl does not seem to consist in the quantity of lime which it contains, as this is hardly more than six per cent., but in the consistency which it imparts to the sandy soil. It is singular that it has been so little used in the south of the island, where it is even of better quality than in the north, and where the deficiency of lime can be so easily remedied. When Sacheverell wrote in 1703, the Manx farmers are stated not to have had the skill or purses to lay it out on their grounds. The marl of the north is of three kinds: the Andreas marl, generally red, and evidently of the boulder-clay formation; the Jurby, which is of a lighter colour with streaks of blue, and containing sometimes vegetable impressions to a great depth; this is probably the deposit of some of the ancient lakes; and the white shell-marl of Ballaugh belonging to the very ancient alluvial basins of the period of the Megaceros or Irish Elk. The preference is given to the two former, especially the first. About 3300 bushels per acre are laid upon light lands, and 2800 on those of stronger quality. The heaps collected in summer lie till winter commences, when the marl is spread and ploughed in. A bushel of marl, unheaped, weighs about 112 lbs.—See Quayle's *Agriculture of the Isle of Man*, p. 93.

evidently Norwegian, the more ancient appellation being St. Patrick's Isle: and insular at one time the parish certainly was, the sea sweeping round it westward and northward, and the Curragh with its out-flowing waters to the eastward and southward. There is a tradition that all the waters of the river Sulby, which now taking an easterly course from the mouth of the glen, flow into the sea at Ramsey, formerly found their outlet on the northern side of the island by the Lhen-Mooar. It is easily seen that a very little labour would, if it were necessary, turn the river down that way again.

St. Jude's Church, in the parish of Andreas, is a marked object in the very centre of this great plane area. It stands on an outlier of the drift-gravel,—a kind of spur thrown out westward from the Andreas bank into the midst of the lake. The parish church of Andreas is not so readily distinguished through the want of a tower or spire. St. Bride's Church is altogether out of sight, as it lies on the other side of that low rounded chain of hills stretching out from Blue Head to Point Cranstal.

A very great relief to the sameness of scenery throughout the wide-spreading flat area of the north of the island is afforded by several luxuriant patches of trees, which are aggregated at suitable intervals around the better sort of farm-houses, which occupy prominent points around the margin of the Curragh. The woods also stretch up the mountain valleys, and clothe the north-eastern face of the mountains themselves, and thus give a varied richness to the landscape, especially as viewed from the northern side of the Curragh in the neighbourhood of East Nappin and thence along the road to Kirk Andreas. Ballaugh is peculiarly interesting to the geologist as the locality where the first tolerably perfect specimen of the Great Irish Elk was discovered. At a farm known by the name of Balla Ter-

son to the eastward of the new church, and about a mile from the foot of the mountains, are two oval depressions in the drift-gravel platform\* ; they are on either side of a by-road which leads down from the great northern high road to the sea-shore. It was in the more westerly of the two that the celebrated fossil† was discovered. Mr. Oswald of Douglas‡ has well pointed out both the character of this basin and the circumstances under which the Elk was found. It is a small turf-bog about a hundred yards long by fifty wide, occupied in the central part by a pool varying in size according to the moisture of the season, in which aquatic plants luxuriate. The superficial stratum is a light and fibrous peat of good quality, enveloping some fragments of bog-timber. The thickness of the peat in the centre of this basin is six feet, but it thins out considerably towards the margin. Under the peat is a bed of fine bluish-white earthy sand from two to three feet in thickness. This rests upon a deposit of white marl containing delineations of shells. The marl is of a fibrous laminar structure, and when dry as white as chalk ; the shells are delineated white upon a somewhat darker ground, and are discovered by separating the layers, but are seldom if ever found in their original state. In this marl a great quantity of bones of the Elk were found at the first opening of the pit, occurring at various depths in the marl, but

\* See Plate VIII., Section from the mountain-range to Jurby Point.

† *Megaceros Hibernicus*. See Professor Owen's Report to the British Association, 1843, p. 237 ; also his *British Fossil Mammalia*, p. 447. The figure in the 'Ossements Fossiles,' tom. iv. pl. 8, is taken from an engraving of the Ballaugh skeleton transmitted to Baron Cuvier by Professor Jamieson.

‡ See "Observations relative to the Fossil Elk of the Isle of Man, by H. R. Oswald, Esq., F.S.A., Surgeon," in the 3rd vol. of the *Edinburgh Journal of Science*, 1826, p. 28.

the deeper they were found the more fresh and perfect did they appear, and near the bottom complete heads were found.

The skeleton which was presented by the Duke of Athol to the Museum of the University of Edinburgh, was found quite at the bottom of the marl where the bed was about twelve feet thick. The different bones, though partly connected, were in much disorder. An ingenious blacksmith of the village possessed himself of the skeleton, and in putting it together according to his own ideas of what the animal was, found himself short of a few bones, which he supplied from the relics of other animals, and it was some time before the fraud was discovered.

This shell-marl would appear to rest on the boulder formation, according to the description given by the workmen. When they pierced it, water immediately sprung up and inundated the pit. It is worth while to notice that the peat and timber are confined to the surface of the basin, and that in them no remains of the Elk were found, and this has been universally the case in the Isle of Man. Under the portion of the Ballaugh Curragh which stretches down towards Ballamona, and pours forth its accumulated waters by the Carlaane drain into the sea, similar basins to these have been discovered\* containing the remains of the Elk, but they are all below the great turf-bogs in which we meet with trunks of trees both upright and prostrate†.

There is no doubt that great changes have taken place throughout this northern area, even within the period

\* See Plate VIII., Section from the mountains to Jurby Point.

† See the statement of Bishop Wilson, History of the Isle of Man, p. 341: "Large trees of oak and fir have been found, some two feet and a half in diameter; they do not lie promiscuously, but where there is plenty of one sort there are generally few or none of the other."

which has been called historical. The old map of the Isle of Man performed by Thomas Durham, as given by Speed, Camden, Chaloner, and in Bleau's Atlas, exhibits ancient lakes both in the south and north of the island\*. There was the Malar lough in Lezayre, a lough in Andreas parish, and Bala lough, the corruption of which has given the present name of the village in its vicinity—Ballaugh†.

The great lake of Myreshaw or Mirescogh seems to have occupied at one time a large portion of the Curragh‡ near the base of the mountains, and so late as 1505 we read of

\* See Plate IV. In some portions of the drained Curragh have been found stone celts and other relics of more ancient times, such as coracles which were probably sunk in these ancient lakes. I have in my possession a celt of the simplest kind, found under the peat on the edge of the Curragh near East Nappin. In a meadow adjoining Close Mooar, the property of Professor E. Forbes, were found a short time ago a stone axe and sharpening or edge stone a few feet asunder. They lay upon a bed of fine sand, covered over with a stratum about four feet thick of peat trunks of oak-trees, &c., and over the peat was a bed of blue alluvial clay to the depth of three or four feet.

† Some derive the name from Balla laagh, *the place of the mire*. There are several Balla loughs in different parts of the island.

‡ Sacheverell mentions (p. 3) the draining of the Curragh towards the close of the seventeenth century. It is probable that the discovery of the firs situated eighteen and twenty feet deep in the Curragh, with their roots still firm in the ground, but their heads broken off and lying to the N.E., noted by him (p. 12), was made at the period of this drainage. In my Memoir read before the Geological Society of London, February 4th, 1846, I made mention of the Megaceros marl-pits at Ballaugh as drained at that period, and stated that the white marl of these pits is more recent than the blue marl of Jurby. On a closer examination, I find good reason for concluding that the white marl is more ancient than the deposit of the lakes then drained, and perhaps more ancient than the Jurby marl, though this is apparently an alluvium older than the forests of which the remains are found in the Curragh.

a grant of one half of the fishery of it to Huan Hesketh, Bishop of Man, by Thomas Earl of Derby. The names of several estates in this neighbourhood (such for instance as Ellan Vane, *White Island*) point to their original condition, as well as the nature of some of the holdings, which show that even since the Act of Settlement, there has been a large territory once occupied by water reclaimed to the purposes of husbandry.

The mention of the lake Mirescogh reminds us of a strange legend detailed by the venerable Chroniclers of Rushen Abbey, which at any rate adds another link to the chain of evidence which we have of the great change which has here taken place in the appearance of the country.

In an old document at the end of the 'Chronicon Man-niæ,' tracing out the boundary of the church-lands, we find mention made of three islands in the lake Myreshaw\*. One of these islands seems to have been occupied as a state prison, and was once, as the good old monks tell us, the scene of a notable miracle wrought by the intercession of St. Mary of Rushen.

One Donald, a veteran chieftain, a particular friend of Harald Olaveson, flying the persecution raised by Harald Godredson, took sanctuary with his infant child in St. Mary's monastery at Rushen. He was however induced to

\* "This is the line that divides the lands of Kirkercus from the Abbey lands. It begins at the lake of Myreshaw, which is called Hescanappayse, and goes up to the dry moor directly from the place called Monenyrsana, along the wood to the place called Seabha-Akonathway. It then ascends to Roselan as far as the brook Gryseth, and so goes up to Glendrummy, and proceeds up the King's way and the rock called Carigeth as far as Deep-pool, and descends along the rivulet and Heth-aryegorman; and so descends along the river Sulaby to the wood of Myreshaw. It encloses three islands in the lake Myreshaw, and descends along the old moor to Dufloch and so winds along and ends at the place called Hescanakeppage."



come forth under faith of a promise from the king of perfect safety. Within a short space however the king, violating his sacred engagement, ordered Donald to be seized and conveyed to the state prison in one of the islands in Mirescogh. In his distress Donald prayed earnestly to the Lord to deliver him through the intercession of the blessed Virgin, from whose monastery he had been so insidiously betrayed. The divine interposition was not withheld. One day as he was sitting in his chamber guarded only by two sentinels, the fetters dropped from his ankles and he found himself free. He made the best of his way to the abbey of Rushen, which he reached on the third day, where he put up thanksgivings to God and the most merciful Mother for the deliverance. This declaration, adds the chronicler, we have recorded from the man's own mouth. The date of the miracle is 1249\*.

In proceeding inland eastward from the sea-coast, we descend to a lower level from hills of the boulder clay formation covered with beds of blown sand, to the terrace of drift-gravel which fringes the great plain of the Curragh. The high road from Ballaugh to Ramsey runs for a considerable distance upon this fringing bank, and forms a drive hardly anywhere to be surpassed in loveliness. A close planting of ash and elm on either side of it presents an avenue for several miles in length, through the breaks in which we catch sight of strongly contrasted scenery on the right-hand and on the left. On the right we have a sudden and abrupt termination of the mountain-chain, which sinks down almost at once from its greatest altitude to the level of the gravel terrace. The descending gorges, which open out with a more gentle slope towards the plain, are well clothed with wood, and have been happily seized upon as sites for a series of beautiful villas along the whole of the

\* *Chronicon Manniæ*, p. 39.

way to Ramsey. On the left-hand a fine champaign country opens out to a distance of three or four miles, bounded by the line of low rounded hills which stretch from Blue Head to Point Cranstal. We catch sight of the different homesteads of the farms which are scattered throughout it, whose whitened walls and wreathing columns of smoke are just distinguished amidst the clump of trees surrounding each of them; and around in the more open lands the flocks and herds occupy the reclaimed Currags, which afford rich pasturages alternating with arable land.

But if there be one point which more than any other will attract the attention of even the most ordinary admirer of scenery, it will assuredly be Sulby glen. The stream which waters it, and is the largest in the island, is thrown off the north-western side of Snæfell, and pouring down Glion-Mooar, spreads itself out on the alluvial plain, and after a course of eight miles falls into the sea at Ramsey. It is throughout a beautiful trout-stream, and in no small repute with our first-rate anglers.

A fine view of the country may be obtained just at the entrance to the glen from the Curragh, by following a winding road to the right-hand from the cloth mill up the side of the hill for a short distance till we reach a stone quarry\*. At the extreme left, looking over the Curragh, is Jurby church standing on an eminence which forms the extreme north-western point of the island; beyond we have a fine view of the sea backed by the Mull of Galloway and the Scotch mountains to the north. Looking directly north we may track the course of the Lhen-Mooar, which was once the outlet of the Sulby river, a gap in the drift-gravel

\* The following note of this point occurs in my field-book. The great beds of schist have the appearance of being turned over on an axis whose strike is east and west magnetic. The stretching has produced divisional planes concentric with this axis with cross joints, which cause the rock to split up into rhomboidal fragments.

near Blue Head admitting the passage of the waters in that direction. The churches of St. Jude and Andreas lie a little to the right of a line hence to Blue Head, whence we mark the undulating ridge stretching out eastward towards Kirk Bride and Point Cranstal. This chain of hills evidently formed at one time a line of sand-banks in the pleistocene sea parallel to the then northern coast of the Isle of Man; and at a distance of four miles from it the Sulby stream, which winds at our feet and sets in motion yonder wheel, is richly clothed with wood, from the midst of which, at a point where the waters begin to flow eastward, the Sulby school-house with its pointed windows and pinnaced walls peeps forth\*. To the right Cronck-y-Shammock (the Hill of Primroses) bounds the view, shutting out the neighbourhood of Ramsey. It is a singular fantastic pile of rock standing out at the mouth of the glen, a giant sentinel guarding the pass to the south, and keeping watch and ward over the inhabitants of the great northern plain of the island.

The road up Sulby glen affords the best access of any to the summit of Snaefell (the Snow Mountain), and the ascent may be accomplished in this direction with extreme facility, even in a vehicle, to within a short distance of the top. It may be approached also by the road through Glen Aldyn (the vale of Aldyn or Aydun†), which is nearer to Ramsey, and equally picturesque with Sulby Glen, as well as from Injebreck and Laxey, though the morasses on the southern side render it necessary for strangers to use some caution in ascending by the latter routes.

At Sulby bridge is a good road running direct north to

\* The internal arrangement of the building is such as to provide a school for week-day, and a small chapel for the Sunday services.

† Aydun was the grandfather of Ferquard, Fiacre and Donald, who were sent to the Isle of Man to be educated under Bishop Conanus, who is said to have had his episcopal residence in this vale.

the parishes of Andreas and Bride, and passing the Craig and St. Jude's church, and the old earthen fort of Ballachurry, which is extremely well worthy of a visit\*. In this direction the geologist will get an excellent insight into the structure of the northern area. The different patches of Curragh still remaining, and their relation to the drift-gravel, which has been excavated in many places and sifted for road materials, come very readily under his observation.

Let us take the road on through Andreas which leads to the Bride Hills. We pass Braust on our way, formerly the residence of Archdeacon Mylrea, and further on Thurôt Cottage, which seems to have been so christened in memory of the gallant French Commodore who fell in a naval engagement off the northern coast of the Isle of Man.

The name of Thurôt about the middle of last century filled with apprehension the inhabitants of the sea ports of Great Britain. A native of Dunkirk, at the age of fifteen he joined the adventures of an Irish smuggler and became a successful contrabandist between the shores of the two Monas, running spirits from Man to Anglesey, and afterwards did business on a larger and more daring scale from the shore of his native country. By his exploits as a privateer in the war which broke out between England and France in 1755, he gained the command of a frigate and afterwards (in 1759) of a squadron of five ships, with which he made descents upon the coast of Ireland and plundered Carrickfergus. Captain Elliot, hearing of his

\* It appears to have been thrown up during the period of the great rebellion by the troops of Cromwell. It consists of an internal rectangular area of 144 feet long by 120 feet wide, at the corners of which are four bastions, whose tops are about forty-eight feet square, all constructed of the earth which has been thrown up out of the ditch which surrounded the encampment. There are a great many barrows in the parish of Andreas, and in the churchyard some very interesting Runic crosses.

exploits, set sail in quest of him with three frigates, and on rounding the Mull of Galloway on the 28th of February 1760, he discovered the French Commodore at anchor with three vessels near the entrance of Luce Bay\*. He attempted to embay him, which Thuròt perceiving stood out to sea towards the Isle of Man, the scene of his earliest adventures, but was soon overtaken by the English squadron, and a sharp action ensued. The carnage on the side of the French was very great in consequence of the crowded state of their vessels, and Thuròt himself fell by a grape-shot as he was cheering on his men to renew the fight. He was thrown overboard by his own men, but was afterwards cast ashore near the Mull of Galloway, and buried in the grave-yard of Kirkmaiden. The bowsprit of the Belleisle, two yards in circumference, which was struck off in the action, came ashore near Bishop's Court; and in commemoration of the action and as a trophy of victory, Bishop Hildesley caused it to be erected on a mount which he named Mount Æolus, a little above the garden of his episcopal residence.

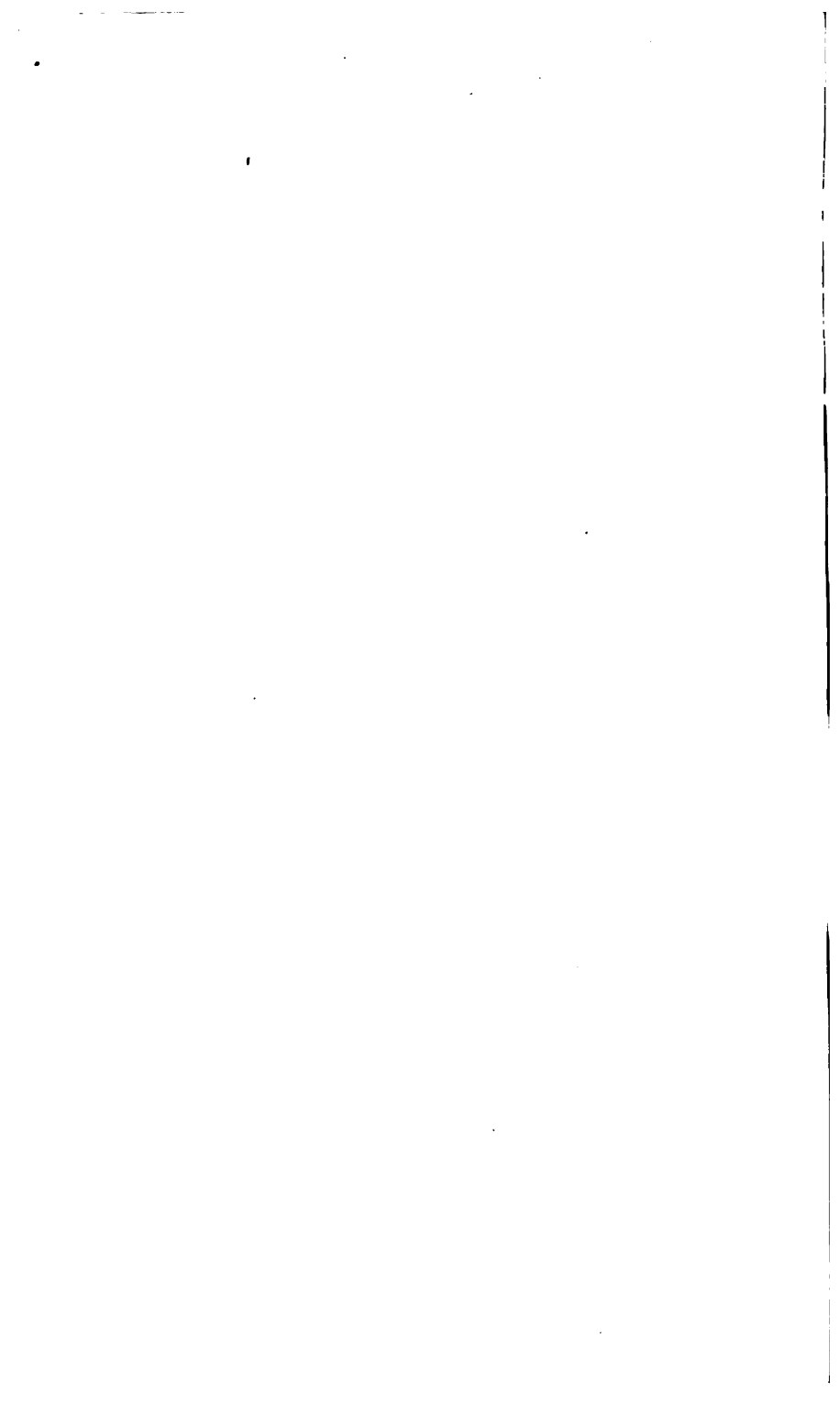
The rounded form of the hills of Kirk Bride has before been alluded to. They seem to have formed a sand-bank in the pleistocene sea at the distance of about four miles from the coast, and to have been subject to the action of

\* The respective squadrons consisted of the Æolus 32 guns, Pallas 36, Brilliant 36, on the side of the English; and on the side of the French the Belleisle 48 guns, Blonde 36, and Terpsichore 36. The contest lasted an hour and a half, and was attended on the side of the English with the loss of only five men killed and thirty-one wounded. Besides their commander, the French had above three hundred killed and wounded in the engagement, of whom nearly two hundred were on board the Belleisle. Thuròt had previously lost two of his vessels at sea.

See Appendix to Memoirs of Bishop Hildesley, and Smollett's History of England, chap. 19. page 388.



*Mountain Range in the State of New York.*



conflicting currents. It is most interesting to compare them with the rounded chain of low hills in the south of the island of the same age, as well as with the conformation of the Bahama Rig\* and King William's Bank, Whitestone's Bank, and Point of Ayre Bank of the present day.

The view from these hills is highly picturesque in every direction. Looking southward, we have the fine expanse of the Curragh contrasted against the towering masses of the great insular chain. The splendid bay of Ramsey, with its richly wood-clad environs, the heights of Ballure, Skyhill and Claughbane, stretches out south-eastward and is shut in by the serrated precipices about Maughold Head. The Cumberland mountains, at a distance of between forty and fifty miles, present their majestic outline in the far east. We look up the Frith of Forth, but the shores are too low to allow the eye to rest upon any particular feature of them. It is not till we have traced round somewhat northward that we begin to catch sight of the Scottish giants, and then the granitic range from Criffell toward Kircudbright is set before us. Burrow Head, at the di-

\* The Bahama Bank or Rig bears N.E. two leagues from Ramsey, is about four miles long from S.S.E. to N.N.W., with only six feet water at the south end low water spring-tides and is about half a mile wide. King William's Bank (so called from the Prince of Orange, who was nearly wrecked on it on his way to the battle of the Boyne) is seven miles in length from S.E. to N.E. and half a mile broad. The N.W. end is east six and a half miles from Point of Ayre. The least depth of water on it is eighteen feet.

The Point of Ayre Bank extends half a mile from the Point for one mile eastward and curves round to the south-east towards the Bahama Rig. There is always a ripple on it, and the current runs seven miles an hour.

Whitestone Bank lies S.S.E. a mile and a half from Point of Ayre, with a good passage between them. It has six feet at low water spring-tides, is half a mile long N. and S., and a quarter of a mile broad.



stance of hardly more than seventeen miles, appears but as the further bank of a wide river. We get a fine peep into Luce Bay, which retreats some fifteen miles inland, and is sheltered on its western margin by the Silurian ridge which forms the Mull of Galloway.

Immediately at our feet northward we have the Ayre spreading out to an extent of 2400 acres, forming an extremely low coast-line raised but a very few feet above the present sea-level. It is very plainly the newest raised beach of the island, at present an almost barren waste of sand and gravel belonging to the Crown, in which a few miserable gorse bushes drag out an impoverished existence, whilst rabbits, snipe and wild duck abound.

The light-house on the Point of Ayre, which was at first close upon high-water mark, has now a good piece of bank extending between it and the salt water. The height of the tower is 106 feet; and it is furnished with two revolving lights, sending forth alternately every two minutes a red and yellow pencil of rays athwart the green waves.

An extension eastward of the Bride Hills terminates in Point Cranstal. We see in the old map of the island that there was once a village in this neighbourhood on the low ground of the Ayre near the little lake Balla Mooar, to which the name of Cranston pertained; it seems to have gone to ruin, but is interesting as indicating the antiquity of the last raised beach, or at any rate the very slow rising of the land. The old town of Douglas, as was before noticed, stands on a similar level on a raised beach of the same age.

Point Cranstal itself is in the same old map denominated "Shellack poynt." It is well-worthy of study as presenting the finest development of the boulder series anywhere to be met with in this island, or perhaps in the British Isles. A grand cliff of clay, sand, gravel and boulders, rises to the height of 200 feet above the sea-level. It

is in every stage of disintegration and decay, seamed in a thousand places by the little gills which burst out between the beds of gravel and clay, or pour down after every heavy rain from the corn-fields, which reach to the very edge of the precipice. The formation of sonorous concretionary masses, having the appearance of stalagmites and stalactites at the base of the cliffs of the boulder series, has been noticed before at the locality of Strandhall in the south of the island, and its origin explained\*. We might have noticed the same at many places on the Ballaugh and Jurby coasts, but nowhere have we such fine instances as at Point Cranstal. Here they are piled one upon the other in most fantastic shapes at the base of every gully, and even high up in the cliff, wherever there has been a break and resting-place where the mud-charged and calcareous waters which have trickled over some upper beds of the boulder-clay series could find a lodgement.

The great mass of clay, presenting not the least appearance of stratification, lies at the base of the cliff. We meet here and there with great cavities in it filled with fine sand; and it is in these cavities, generally speaking, that the more perfect fossils are found; but they are in such a friable state that they will hardly bear removal. The stronger-framed fossils are generally met with in the clay, such as *Fusus antiquus* and *Cyprina islandica*; but a fragmentary condition is the most frequent with all of them, as if the sea-bottom of the time of their deposit had been exposed to the rolling action of great waves or the ploughing action of icebergs†.

\* See Chap. X. *supra*, page 137.

† See Professor E. Forbes's Memoir on the Distribution of the existing Fauna and Flora of the British Isles, and the Geological Changes which have affected their area, especially during the epoch of the Northern Drift, in the first volume of Memoirs of Geological Survey of Great Britain, page 383.

The upper portion of the pleistocene beds at Point Cranstal consists of rudely stratified gravels and sands, with occasionally interposed bands of marl. Throughout the entire mass of the cliff, boulders of granite, syenite, porphyry, quartz, red conglomerate and red limestone are dispersed, but they appear to increase in size upwards, and sometimes attain to the weight of several tons. Similar blocks are scattered on the surface all over this northern area, especially on the tops and sides of the low hills; and I have little doubt that all those stones of which the circles which surround the ancient tumuli in this country are formed, are of this character, and were found within a very short distance of the spot on which they now are placed.

There is a fine beach extending all the way from Point Cranstal to Ramsey, a distance of four miles; the cliffs of pleistocene marl, sand and gravel, gradually sink in height; and from the Dog-mills southward, as far as the Sulby river, at the embouchure of which the town stands, they are hardly more than fifty feet high. South of the town we again find the same beach and cliff for about half a mile, and then a hundred yards beyond the mouth of Ballure glen, the streamlet from which has cut its way through these drift-beds, we see the whole pleistocene series driven up against the old schist rocks of the island, which have here a direct northerly dip.

Let us ramble up the Ballure glen, which for quiet beauty has not its equal on the island. Dark deep green woods throw their mantle over a rugged ravine, which extends for two or three miles up into the wilds of North Barrule. A bright clear stream comes tumbling down from crag to crag, and sprinkles a dewy freshness upon the mosses and creeping thyme and hanging ivy which grace its border. A bridge of a single span carries the high road from Ramsey to Laxey across it at a point where the jag-

ged schists have just opened to let the streamlet tremble and struggle through. Let us mount higher still, and follow a green grassy path which strikes upwards on our right-hand, and zigzags amongst the plantations which crown the height immediately overlooking the town of Ramsey. We emerge at length on a fine terrace stretching towards Clabane and Skyhill\*, and a splendid panorama is opened before us. The metropolis of the north lies at our feet. It is a busy, active town; the mountainous district which separates it from Douglas, and makes the communication tedious, has forced it into a sort of self-dependence; so that whilst Castletown has barely trebled itself in the last hundred years, Ramsey has much more than quadrupled in the same time. Its chief foreign dependence is on Glasgow rather than Liverpool, the steamers from the former place southwards touching at Ramsey, wind and weather permitting, and keeping up a friendly com-

\* Skyhill is noted for the military manœuvre which placed the crown of Man on the head of Godred Crovân, son of Harald the Black of Iceland. In his attempt upon the Isle he had met with two repulses. Once more he got together a large armament, and coming by night to the harbour of Ramsey, he managed to land and conceal a body of 300 men on Scacafell or Skyhill. At sunrise the Manx attacked Godred with considerable fury; but in the heat of the engagement, the 300 men, rushing from their ambuscade, terribly galled the Manx in the rear, and put them to rout with great slaughter. Godred gave his troops the option of dividing the Isle amongst them for an inheritance, or of pillaging it and returning home again. The majority chose to plunder the country; a portion however preferred remaining with Godred, and with them he shared the southern part of the island, leaving the northern to the natives, on condition that no one whatever should attempt the establishment of an hereditary claim to any part. The property of the whole isle and its revenues thus became vested in the Sovereign, nor till the Act of Settlement did the people acquire a valid title to their different estates.

munication with the manufacturing metropolis of Scotland. The ruined church which we see above the town on the terrace of the northern drift, beautifully embayed in the woods, was erected not a hundred years ago, and consecrated by Bishop Wilson himself when in the ninety-third year of his life. The church now in use (St. Paul's) stands in the centre of the town, and was built by subscription in 1819. Hard by it is the Court-house, where the northern Deemster holds his courts. A substantial bridge of three arches, and 180 feet long, spans the Sulby river a little westward of the town, and makes a communication with the northern parishes of Andreas and Bride.

The spot on which we are standing is pointed out with a feeling of pride by the people of Ramsey as that from which the royal consort of our beloved Queen took a survey of the outspread landscape on the morning of the 20th September of the last year, when her Majesty gladdened the hearts of her loyal Manx subjects by a second visit to the shore of Old Mona on her way from Scotland. His Royal Highness greatly commended the fair scene, and the spot whence he surveyed it has ever since borne his name, and is marked with a memorial pile.

Let us journey again southwards, taking the eastern coast as our route. When we have passed Ballure glen about a quarter of a mile, the southern road divides into two, one of which continues to mount upwards along the eastern face of North Barrule, the other on the left-hand sinks down again to Port Lewaigue\*, and so on to Maughhold Head.

Port Lewaigue is a sweet retired nook, and might easily be made into a small dry harbour, conveniently auxiliary to Ramsey. A small spur has run out from the schists in a north-easterly direction for about 500 yards, and forms a

\* Called also Port-le-Voillen.

natural breakwater on the eastern side of the little creek ; if it were continued in a northerly direction for about 200 yards further, the harbour would be sheltered from every gale. This spur is very low, sufficiently so to be capped by the northern drift, which has also found a resting-place in the recess of the bay, and stretches a little distance inland\*.

On a bank by the road-side on the left-hand, as we pass onwards towards Maughold, we fall in with a Runic monument of freestone, its height 5 feet and its width 2 feet 8 inches. Its location is singular, and would raise a suspicion that there has once been one of the quarter-land oratories in this neighbourhood. The entire parish of Maughold seems at one time to have been invested with a somewhat higher sanctity than the other parishes of the isle ; the church has more tokens of architectural care and embellishment ; the churchyard† is much larger than any other, and the Runic and other ancient monuments are more abundant‡.

\* See Plate I., Map of the Isle of Man.

† It contains five statute acres. The length of the church, including the chancel, is 72 feet and its width 17. A similar proportion holds in most of the old Manx churches.

‡ There is one Runic stone raised on steps as a market-cross in an open space before the church-gates, carved on both sides, though much injured. Its length is 6 feet 6 inches, and breadth at the widest part 2 feet 6 inches. Another on the south side of the church (an excellent model for the headstone of a grave) is 3 feet 6 inches in height and 2 feet 6 inches wide. A third near the eastern gable is 7 feet 4 inches long and 2 feet 4 inches wide.

A singular cross of the fifteenth century stands at the left-hand on entering the church-gates. It is raised on three steps, and consists of a slender shaft 4 feet 10 inches high, surmounted with a peculiar quadrangular entablature 3 feet high. The carving on two of the faces of this entablature is greatly obliterated. On the other two we have bas-reliefs, one of which represents the Virgin Mother and

The shrine of St. Machutus, Machaldus, Macfield, Mac-hilla, Magharde, or Maughold, as he is variously styled, who was buried here, was held in great repute down to the period of the Reformation ; and here we find a sanctuary was established in very early times. The legend of him is, that originally having been captain of a band of Kerns, or Irish freebooters, he was converted to the Christian faith by the great apostle of Ireland, St. Patrick. Desirous of withdrawing from the scenes of his former lawlessness, he is said to have embarked in a frail boat made of wicker-work and covered with hides, and committing himself to the guidance of the Almighty, he was driven by the winds and tides, and at length cast ashore on the Isle of Man at the headland which still bears his name. The severity of religious discipline to which he subsequently subjected himself spread his fame for sanctity far and wide ; and Manx tradition records that St. Bridget\*, the famous nun, came hither to receive the veil of perpetual virginity from his hands, and that on the death of Romulus he was by universal consent elected to the bishopric of the Isle. To him, as before has been mentioned, we owe the present division of the isle into seventeen parishes.

On the north-eastern side of that magnificent headland which forms the southern limit of Ramsey bay, is a little spring bursting out from the chinks of the uptilted and twisted gray schists. Immediately above rises the pile of Child, and the other the Crucifixion. Under the latter is a shield bearing the arms of Man after the Scottish conquest ; under the former a shield charged with a rose contained in a garter or circle.

\* The Irish dispute the truth of this legend, affirming that it was from St. Patrick that Bridget received the veil. See *supra*, p. 21. Sacheverell however says, " In this retirement it was that St. Bridget, one of the tutelar saints of Ireland, came to receive the veil of virginity from his hand, as her nephew Cogitosus, who wrote her life, informs us.

rock, which fetching up with a fine sweep from the valley extending between Port-le-Voillen and Port Mooar, sinks down again precipitously nearly 500\* feet into the salt water. Veins of ironstone† and masses of quartz rock interposed in the schists, give a variegated appearance to the north-eastern angle of the precipice, with red and white streaks upon a gray ground. Round about the spring a soft green sward clothes a few roods of ground, and for a few yards, where it trickles in its overflowings adown the face of the steep, a crop of rushes luxuriates. Where the spring gushes forth the rock has been hollowed into a small basin, and over it has been erected a simple shed of rough unhewn blocks of the rock immediately at hand. Hither the Saint is said to have resorted; nor is it altogether improbable that nearly fourteen hundred years ago at this very font he administered the baptismal rite. Certainly it was for many ages in great repute for its medicinal properties, and was resorted to on account of its sanctity by crowds of pilgrims from all parts. Nor is it yet forgotten. The first Sunday in the month of August calls forth the neighbourhood to their annual visit to the well, and bottles of the water are there and then procured, carried away to the homes of each, and preserved for any emergency with scrupulous care.

The peculiar sanctity of the church of St. Maughold and its immediate precincts has just been alluded to. There is a legend detailed in the 'Chronicles of Man,' which, whilst it serves to bear out this remark, is such an amusing instance of the honest credulity of the Rushen Cistercians, that it seems worth while to give it almost *in extenso*.

\* The height of Maughold Head, as determined barometrically by Dr. Berger, is 475 feet.

† For an account of the iron mines of Maughold, see Appendix, K.



Somerled Jarl of Argyle had taken up arms against Godred Olaveson. A sea-battle was fought between them on the eve of the Epiphany (1156), with such doubtful success to either, that the next morning they came to a compromise to divide between them the sovereignty of the Isles. Under this compromise Somerled acquired all the Isles, excepting Man, south of the point of Ardnamurchan. From that period the sovereignty of the Isles ceased to be vested in one single person.

In the year 1158 Somerled again with a fleet of fifty-three ships came to Man, where encountering Godred, he defeated that prince, who then fled to the court of Norway to crave assistance.

On the approach of Somerled to the Isle the second time, the Manx people conveyed their money and valuables to the sanctuary of St. Maughold's Church, in hopes, says the Chronicler, that the veneration due to St. Machutus, added to the sanctity of the place, would secure every thing within its precincts. After the battle, in which he was victorious, the fleet of Somerled lay at Ramsey, and one of his captains, Gil Colum, made a proposal to surprise the church of St. Maughold, and at least drive off the cattle which were feeding around the churchyard. With much reluctance Somerled consented, pronouncing at the same time these words; "Let the affair rest between thee and St. Machutus; let me and my troops be innocent; we claim no share in thy sacrilegious booty." Gil Colum laid his plans accordingly, arranging with his three sons to effect the surprise at daybreak of the following morning; but as he lay asleep in his tent at dead of night, St. Machutus appeared to him arrayed in white linen and holding a pastoral staff in his hand, with which he thrice struck him in the heart. Awaking in great terror of mind, he sent for the priests of the church to receive his confession, but they

had no words of comfort for the dying wretch. One of them even proceeded to pray that St. Machutus would never withdraw his hand till he had made an end of the impious man, and immediately he was attacked by a swarm of filthy, monstrous flies, and about six in the morning expired in great misery and torture. Somerled and his whole host were struck with such dismay upon the death of this man, that as soon as the tide floated their ships they weighed anchor, and with precipitancy returned home.

The road leading from Maughold to Laxey is wild in the extreme. There are however two lovely valleys running down to the sea, the one terminating in Corna Creek, or, as it is sometimes called, Kennay; the other is that through which the Dhoon river delivers its waters. This river, or rather burn, takes its rise in a granitic boss, which stretches out from the headland between Corna Creek and the mouth of the Dhoon, on an estate known by the name of the Barony, up inland for a mile and a half towards Snaefell. The granite is of a much more compact character than that on South Barrule, approaching more to the condition of a gray syenite, small particles of hornblende being substituted for the flakes of mica which appear in the granite of the southern district of the island. It has not hitherto been worked, but is evidently far more available than the more inland mass on South Barrule, and its character much more durable. It ought at least to be used on the roads of the north-east side of the island, instead of the soft clay schist which is too frequently laid upon them.

In passing down the hill into the Laxey Valley, on the right-hand side, at the turn of the road, is a cairn which it has been asserted is the resting-place of the ancient warrior King Orry, to whom the island is indebted for the institution of the House of Keys. A few years back the owner of the property on which it stands not having the

fear of fairy or phynydorree before his eyes, but seeing the stones lying convenient for a fence he was busy on, set to work to remove some of the lesser from the central heap of apparent rubbish in which they were fixed ; in doing this he discovered a rude dome-shaped vault, in the centre of which was a kistvaen composed of two large slabs of schist, placed parallel to each other in a direction nearly east and west, but inclining towards each other above, at the extremities of which seem originally to have been placed vertically thin slabs of the same rock which had been broken. Inside were a few brittle bones and teeth of a horse, and here the search was discontinued. The discovery of the remains of the horse is so rare in barrows which can be determined of the date of the ancient Britons, that in the absence of other evidence it may be safe to attribute this at Laxey to an early period of the possession of the island by the Northmen. This kistvaen is evidently but one of a number collected at the spot, and further careful research would probably be attended with most interesting results.

As we descend the hill a few hundred yards further and before entering the village, the position of a patch of the drift-gravel platform through which the road has been cut should attract notice, as it is one of the few links along the eastern coast which connects the great expanse of that series in the north of the Isle with the gravel, sands and clay of the same age in the south.

Laxey valley and village, *Laxi baye and towne*, as the old chronicler Speed has it, is sufficiently beautiful to merit a special visit to itself. There is also a bustle about the place caused by the hands employed in the neighbouring mines and the paper-mill, which comes very unexpectedly upon us whether we journey through it northward or southward. So deep in fact is the glen, so precipitous the mountain sides which hedge it in, that were it not for the

many wreaths of smoke which come curling up out of this great natural cavity, even within a very short distance, we should hardly suspect that we were near the clustered habitations of men. The ascent of Snaefell may be very well accomplished in this direction, as has before been noticed; and on the road a mile and a half up the valley we pass the entrance to the mines, from which very large and valuable shipments of copper, lead and zinc have been and continue to be effected. The village of Laxey is situated in the parish of Lonan, and by taking the left-hand road which turns up by the school-house near the wooden bridge a mile up the stream, we shall soon reach the old parish church, where there are to be seen two Runic crosses in excellent preservation and well worth study. One of them stands in the church-yard on the south side of the church, the other on a mound between forty and fifty yards from the church on the north side.

We turn again into the Douglas road about a mile from Laxey; and a mile still further brings us to a small circle of twelve stones on the southern side of a little ravine, one of which, six feet high, is remarkable as being cloven from top to bottom, and hence it is presumed that the name cloven-stones which has been given to the spot originated. It has however been conjectured that the word *cloven* is a corruption of *clovan*, and this again from Kirk Lovan\* or Loman†, the ancient name of the parish. The tradition of the spot is that a Welsh prince was here slain in an invasion of the island, and that these stones mark the place

\* In the patent given to William Earl of Derby in the seventh year of the reign of James I., we read the name of this parish Kirk Lovan.

† St. Lomanus, son of Tygrida, one of the three holy sisters of St. Patrick, is said by tradition to have succeeded St. Maughold in the bishopric. See Sacheverell's Account of the Isle of Man, page 120.

of his interment. Mr. Feltham mentions the discovery in the centre of the circle of a stone sepulchral chest or kistvaen ; and in the view which he has given of it as existing at the time of his visit, there is the clear indication of a coved roof of stones forming an arched vault in the centre of the mound.

We pass onward, and the mountains and valleys of the south side of the isle open gradually upon our view. We leave Clay Head on our left-hand, forming the southern limit of Laxey Bay. Here is Growdale, with its quiet sheepwalks and gently purling burn. Crossing White Bridge and ascending the opposite slope, Onchan comes into view, with the richly-wooded grounds of Bamahague. We have the choice of two roads into Douglas, both of them affording most happy views of its bay ; and though we have looked upon many a fair scene of valley and fell, water and wood, in journeying round the Isle, still does this arrogate to itself in each respect those feelings of entire satisfaction which it awoke when first it was spread before our eyes.

## CHAPTER XV.

Lithological character of the Isle of Man.—Granite Bubbles.—Great extent of schistose formations.—The Isle of Man existing as such in the Devonian period.—No disturbance between the Old Red conglomerate and Carboniferous limestone.—The lower and upper Limestone series.—Eruption of Trap rocks and interpolation in Carboniferous beds.—Great gap between the Carboniferous and Glacial deposits.—The Glacial epoch.—Subsidence and emergence of the Island.—Its present condition.

CONSIDERING the Isle of Man lithologically, it may be stated as consisting to the amount of three-fourths of it of a series of schists mantling apparently round bosses of granite, these granitic domes or nuclei being arranged in a rather irregular curved line running in a general direction from S.W. to N.E. There is no appearance of the granite having been pushed up in a solid state through the schists, nor again of its having overflowed the surface\* in the manner of basaltic rocks; but it seems to have risen up in a semifluid condition, in gigantic bubbles (if we may so speak) of molten matter, forcing itself in amongst the schists wherever they gave way.

These granitic bosses appear at the surface in two localities, in consequence most probably of the schists which enveloped them having suffered denudation.

Both these localities are on the south-eastern side of the great range of mountains which divide the island, the one near the head of the Dhoon river betwixt Laxey and

\* I believe that in the streamlet near the Foxdale mines, where the granite appears to overlies the schist, it is simply a case of intrusion along the line of contact.

Ramsey\*, and the other on the eastern side of South Barrule, on the road between Castletown and St. John's Vale†. The schists in contact with the granite have been completely metamorphosed, and as we recede from these nuclei, pass regularly through the stages of a gneissose rock and mica-schist into clay and grauwacke-schist. Of the geological age of the schists we have no good criterion, the few undetermined fucoids or corallines in the newer portion being insufficient guides; they are probably, as far as developed, lower Silurian. Their texture is, generally speaking, softer than the Cambrian or Snowdonian rocks, and the slaty cleavage (if it exist at all) seems very imperfectly developed.

There is little reason to doubt that these schists were deposited in a deep sea. At Spanish Head, where they are nearly horizontal, we have seen that they are more than 800 feet in vertical thickness‡, of a peculiar fibrous kind, not apparently metamorphosed, and yet giving not a trace of organized life, and these rocks form but a small portion of the entire series. Now, as every particle of these sedimentary rocks must have been derived from the destruction and degradation of pre-existing igneous rocks (excepting of course such as may be attributed to animal secretions from the waters of the primæval ocean), we must soon come to the conclusion that an enormous period was requisite for the aqueous deposition of the schistose series alone. Where the continent or land was, the degradation of which furnished the materials for this series, is entirely a matter of speculation.

It is evident however that there was an elevation of the

\* See the last chapter, p. 233, and Plate I.

† See Chapter XII. p. 176, and Plate I., general section across the island.

‡ See Chapter XI. *supra*, p. 147.

consolidated sea-bottom of the Silurian age at the commencement of the middle palæozoic period, as the old red sandstone and conglomerate of the island rest on the upturned edges of the older schists.

Of the existence of some portion also of these schists above the level of the sea, so as to form an island, or series of islands, at the time of the Old Red Sandstone formation, we have seen evidence at several points along the edge of the southern basin of the island, the conglomerate occurring as a mass of small white quartz pebbles in a carbonaceous paste only a few feet in thickness\*, though further down towards the centre of the basin it attains a thickness of from fifty to sixty feet, and in all cases is unconformable to the schists, though passing conformably upwards into the dark limestones and shales; and it is evident that whatever cause elevated the schists, throwing them off to the S.E. by S. and N.W. by N. of the central ridge, has given to the island its general form.

Hitherto no boulders of the central granite have been found in the old red conglomerate, which is negative evidence against the hypothesis of its having at that time been brought to the surface. Still it may have been (and most probably was) the elevating agent, rising up in its characteristic dome shape, and metamorphosing the schists by its molten contact and subsequent cooling. The secondary elevations on the island seem due to an outburst of porphyries at a subsequent period†.

There is no evidence of any disturbance having taken place between the deposit of the old red sandstone and the mountain limestone; the former passes into the latter with a most easy gradation by an abstraction of the larger

\* See Chapter V. *supra*, p. 44.

† As in the case at Rock Mount: see general section across the Island, Plate I.



quartz pebbles, and the substitution of, first, a brown arenaceous, and then of a dark calcareous matrix for the ferruginous paste of the lower portion.

The fossils too of the carboniferous series set on (so to speak) before the quartz pebbles of the old red conglomerate have ceased. This we have seen to be the case in the south of the island at least, where alone the passage can be regularly observed\*.

In the neighbourhood of Peel, which is the only other locality where the old red sandstone is discovered, the beds are of an increased thickness, attaining about 300 feet, and are in the character chiefly of a workable sandstone. Here the overlying limestone is not seen, having in fact been denuded from the elevated beds; but there is no doubt of its position not far out at sea, as indicated in the geological section across the island†, as boulders of it occur plentifully along the shore, and have been collected at various times for burning into lime. There appears to have been a small patch of it also at one time on the edge of the cliff near Craig Mallin, which has been entirely converted into lime, in the kilns of which the ruins still exist. The old red sandstone in this locality, just under the presumed position of the limestone, is extremely calcareous, and effervesces largely with acids, yet contains its own characteristic fossils, as, for instance, *Favosites polymorpha*.

The carboniferous series, as developed in the south of the island, is divided into two portions in its lowest members; it consists of thick beds of dark limestone, alternating with thin bands of shale; the lifts of limestone not being equally calcareous, or alike convertible into lime when burnt, and it is remarkable that the most fossiliferous are the least suited to that end.

\* See p. 44, *supra*.

† See Plate I.

On a comparison of the fossils of this division with those of the carboniferous series in other parts of the British Isles, we find them remarkably agreeing with the lower Northumbrian type, or still more closely with the series developed in the neighbourhood of Hook Point in the south of Ireland; they may very well be compared also with the Kendal beds. Scarlet, the western horn of Castle-town Bay, is however still alone in its glory of possessing the beautiful fossil which was first noticed there, the *Goniaticites Henslowii*\*, of which the original is in the Woodwardian Museum at Cambridge.

The upper division of the carboniferous series, as seen in the south of the island, indicates, by its different and extremely abundant fauna, that a change took place in the physical condition of the basin in which the deposit took place, probably in consequence either of the filling up or elevation of the then sea-bottom.

The black carbonaceous mud which previously was deposited in this area seems not to have been favourable to organized existence, or the sea may have been too deep for the more abundant species of the lower scar limestone. Certain it is that the two series of dark and light-coloured limestone differ as much in their contained fauna as in their lithological appearance. They have comparatively few species in common, and those which are common are mostly such as have a great vertical range.

The light-coloured limestones again seem separately divisible into (so to speak) zones of life; and thus we see, even within the very limited area of this basin, that, as in the present day, so also in the palæozoic period, there were certain ranges of depth within which each animated species was confined, and that whenever, from any cause the sea-

\* Named in the Dean of Westminster's Bridgewater Treatise *Ammonites Henslowii*.

bottom was elevated or depressed, certain species died out, and others came in to take their place\*.

There were other subsequent changes in the physical condition of this area within the carboniferous period of a still more remarkable nature. A violent convulsion (which may be traced in its effects more particularly along a line running from the Stack of Scarlet through Poolvash) crumpled up the strata into a series of folds†, and formed a number of troughs or smaller basins for the reception of a new and peculiar deposit. There was at first a large outpouring of trap, which, where it has flowed over the limestone, has greatly metamorphosed it; in some cases indeed transforming it into pure dolomite. Whilst, on the one hand, the more violent eruption seems to have been but of short continuance, it is evident also that the vent (wherever it might be) was kept open, and emitted for a lengthened period volcanic ash, which was carried by the currents and deposited quietly in different parts of this area.

We have seen indications indeed that the deposit went on so quietly, or was poured out only at such intervals, as not very greatly to interfere with the development of organized life‡. We find fossils imbedded as regularly in the beds of volcanic ash as in the limestone beds. We find also a very interesting local deposit of black carbonaceous mud (very similar to that forming the earlier shales of the basin) going on at the same time, and mingled with the volcanic products, the prevalence of one or other in any particular locality depending, it would seem, on the relative distance of that locality from the sources of the respective ingredients there deposited. We may easily

\* See List of Carboniferous Fossils, Appendix Q.

† See Plate VII. sections 2 and 3.

‡ See Chap. X. *supra*, p. 129.

explain the appearances, by supposing a river whose waters were charged with a carbonaceous silt, having its embouchure in the neighbourhood, and thus mixing its contents with the quiet outpouring of a subaqueous volcanic vent at no great distance. At one period, indeed, the carbonaceous deposit seems to have entirely prevailed, perhaps the volcanic action entirely ceased, gathering strength for a subsequent eruption. The bed then formed has its own lithological character and fossils. It is the Posidonian schist or black Poolvash marble so largely used for economic purposes\*.

I have termed it Posidonian schist, from the circumstance of its containing the Posidonia in great abundance, and as its characteristic fossil. But it is also otherwise remarkable. It contains, on the one hand, *Favosites Gothlandica*, hardly hitherto considered a carboniferous fossil; and on the other hand, we find in it the first and only traces of coal-plants met with on the island. I have in my possession a beautiful cone of *Lepidostrobus ornatus*.

Like all the other shale beds, this abounds in sulphuret of iron, and in one particular layer the contained fossils have become converted into that mineral: they are exquisitely beautiful, and give us the idea that they are some of nature's electrotypes. Every line and every curve of the original has been preserved with the closest exactness, as we perceive by a comparison with the corresponding species in the limestone beds. And as the surface of many of them presents the appearance of burnished copper coins, the illusion is complete.

This quiet and regular deposit was afterwards suddenly interrupted. The volcanic action was again exhibited with renewed violence, as at the first. The lower beds of the first eruption, together with the beds of volcanic ash, of

\* See Chap. X. *supra*, p. 130.

mixed trappæan ash and calcareous deposits, and Posidonian schists, were contorted, broken up, reduced to a fragmentary condition and enveloped in the outpoured deposits. There results a trap-breccia, in which the fragments of the older beds seem to have been considerably influenced by heat. The Posidonian schist has become cherty, the limestone highly crystalline, and in some cases hardly distinguishable from amygdaloid.

It is an extremely interesting question, as to whether the trap-dykes which stretch across several portions of this basin in a direction a little to the south of east and north of west, were or were not the accompaniments of this eruption. In the only spot (Poolvash Bay) where they can be *seen* in connection with it, they *seem* to merge into the breccia, and the impression consequently is that it was the overflow of the dykes which assisted in forming that breccia, and that the convulsion and contortion of the inferior beds was contemporaneous with the formation of the cracks from which the trap poured forth. There is good evidence to show that whenever the trap did flow forth, forming the dykes, it did not merely find vent through pre-existing cracks, but that the eruption also was the cause of those cracks which it filled; and it seems to have forced itself in also between the beds of conglomerate and the tough superior limestone. Should any clear evidence hereafter arise showing that the trap-dykes are posterior to the trap-breccia, it must still be impossible to fix their exact date, as they may range through the whole of the mesozoic or secondary, and a large portion of the kainozoic or tertiary periods; the next deposits superior to the trap-breccia being those of the pleistocene formation.

In this interval however must at any rate be fixed the protrusion of those porphyritic masses which, as we before said, seem to have formed the secondary elevations on the

island, and perhaps contributed a lift to the central chain. This period seems to be fixed in the following manner. If we examine (as an instance) the ridge running from Rock Mount\* near St. John's towards Cronk Urley, at both which places the porphyry is discovered, we shall find that it was the elevation of this ridge which gave the high angle to the old red sandstone of Peel (to which also the limestone is conformable). But the pleistocene formation at Peel appears to rest quietly on the up-turned edges of the old red sandstone.

Again, the great fault running from Perwick Bay through Port St. Mary, Strandhall and Athol Bridge, in a direction nearly N.E. by N., cutting off at once all the carboniferous series to the N.W. of this line, seems closely connected with these porphyries, which are developed almost continuously along the fault. Since this fault took place a great denuding force has swept over the island, and has planed down both sides of the fault to the same level, and the boulder-clay formation lies evidently undisturbed continuously across the line of disturbance†. And we have similar evidence on Langness, at Coshnawin, and the whole way to Santon Head.

It seems not unlikely that the same denuding action which, as we have just stated, swept away so large a portion of the carboniferous series in the southern basin, reducing to the same level the beds on each side of the fault, laid bare the granitic boss on the eastern side of South Barrule, for the boulders of that granite appear in the boulder clay, but not in any previous formation.

We thus arrive at the conclusion, that, if we except the low extended area of the tertiary formation in the north of

\* See Plate I. General section across the Island.

† See Chap. XI. p. 143, *supra*, and Plate VII., section 1, with comparison of Plates II. and III.

the island, its present physical appearance was attained in great part in the secondary and earlier tertiary periods. Whether in the entire interval between the carboniferous and glacial deposits it was above the waters of the sea, and therefore not receiving on its surface the beds of the Permian, Triassic, Liassic, Oolitic and Cretaceous series, or whether after having received some or all, and having been elevated above the sea-level it was denuded of all of them in succession down to the Carboniferous, and including a portion of it, is quite uncertain. It is evident that either may have been the case, yet neither of these views is without its difficulties\*.

The period of the boulder-clay formation on the island manifestly commenced with a state of atmospheric conditions very different to that existing in the carboniferous epoch or those now existing.

Those conditions seem to belong to a severe climate†. It appears impossible to exclude the agency of ice in the greater part of that formation, though how far this may have been aided in its effects by extraordinary currents and waves of translation, originated perhaps by the upheaval of mountain-chains or extensive tracts of land above the ocean, is still a question *sub judice*. The facts bearing upon the question have presented themselves in the course of our journeys, and I am not without hope that the Isle of Man itself may be found hereafter to afford the key to the unlocking this mystery.

Very distinct evidence, as we have seen, is presented in the south of the island, that vast masses of clay, sand, gravel and fragments of rocks must have been forced along by powerful currents in definite directions. Underneath

\* The former hypothesis would be most consistent with the views which I have expressed at p. 118, Chap. IX. *supra*.

† See list of Pleistocene fossils, Appendix R.

the boulder-clay formation there, the rocks of the limestone series are grooved and scratched in a remarkable manner. The lines are not always continuous, but seem struck out as if by some sharp body brought in contact, suddenly pushed forward and then elevated again\*. The *fragments* of rock also in the boulder-clay formation are themselves scratched and grooved, and when they can be determined as belonging to the island not much rounded. Indeed there is every indication that they were not *rolled* but *pushed* along whilst held tight in some matrix; and what matrix supplying all the requisite conditions can we so readily conjecture as *ice*? The effects of that agent in the present day on the shores of our Arctic and Subarctic seas and rivers† so closely correspond with the appearances presented to the geological inquirer as belonging to the period of the boulder clay or pleistocene formation‡, that we can hardly resist the argument for the identity of the agency in both cases.

The lower portion of the boulder deposit is the more loamy. Perhaps this may argue that it was originated in a muddy and deep sea, and the included fossils point to the same hypothesis. Yet the ploughing-up by icebergs of a sea-bottom, consisting of limestones and shales, tilted so as to present a series of basset edges to the drifting currents, must have contributed largely to the materials of this formation. And it has been noticed, as remarkably confirmatory of this view, that the boulder clay to the leeward of any particular rock relatively to the drifting current has the predominant colour and mineral contents of that rock; to the leeward for instance of the basset edge of the old red sandstone it has a reddish tinge, of the limestone and shales a dark dingy blue.

\* See Chap. IX. p. 115, *supra*.

† As in the instance adduced, p. 117, *supra*.

‡ See p. 113, *supra*.



It will readily be conceded, that in such a climate and insular locality, the loftier mountains might generate glaciers, bringing down large accumulations of detrital matter, with angular and scratched fragments of rocks. As yet however no distinct evidence has presented itself of such glaciers having existed on the Isle of Man. The small elevation and extent of its mountains above the then sea-level would by some perhaps be considered hardly favourable to their development, though modern researches have shown that in islands within the arctic regions glaciers descend even to the sea-level\*. But the icy waves (especially if aided by storms) must have acted powerfully in the degradation of the shales, whilst masses of gravel and sand frozen into coast-ice would be carried onwards by the currents, which hurried through the different channels, and being arrested in their course by any more elevated object, would become packed, and form heaps of gravel, sand and clay on the deliquescence of the ice.

The formation of long ellipsoidal hillocks, whose major axis (so to speak) is in the direction of the general drifting current (as shown by the subjacent scratched rocks), is a very remarkable fact, and has been well-studied in the south of the island; whether they were so formed originally beneath the sea, or have attained the shape through the action of currents at a period of gradual elevation, it may not at present be safe to say. That after a long continuance of depression there was for some time again a gradual elevation of the sea-bottom seems pretty clear, and that the sea itself subsequently became of a less muddy character† is also evident; the upper portion of the boulder deposit

\* See 'Recherches sur les Glaciers, les Glaces Flotantes, les Dépôts Erratiques, &c.,' by Mons. Jules Granges. Paris, 1846. See also p. 27, *supra*.

† See the Memoir of Professor E. Forbes in the first volume of the Geological Survey of Great Britain, pp. 383 and 385.

consisting largely of rolled pebbles, gravel and sand, generally in waved layers, with very little clay. The contained rocks too in the upper portion, as we have seen, are more generally foreign than in the lower. We should be prepared to expect this, as presuming the boulder-clay series at the commencement of its formation to have been originated in the manner we have described, in at first a gradually deepening sea and without any extraordinary action of denuding waves; it would follow, that after a time, when the sea-bottom became well-covered by this deposit, the further degradation of the inferior rocks by the ploughing action of the icebergs would cease.

In speaking of the commencement of the boulder-clay formation, as presenting to us no problems requiring necessarily a violent diluvial action for its solution, it is not intended that no such action existed at any period of the deposit. On the contrary, there are phænomena which point to the probability at least, that enormous waves with vast carrying force must have swept over the surface of the island at a later period of the formation. The general appearance of its eastern, as compared with its western side, described by Swedish naturalists under the term *stoss seite* or weathered side, indicates in some measure that fact, and also the direction of such action. But the evidence which tends most powerfully to the establishment of such a view, is to be read in the phænomena presented to us on the western side of South Barrule. We have noticed there\*, on its western side, and even within a hundred feet of its summit, large boulders of the same granite which is developed on its eastern side more than 600 feet below the summit. No simple carrying action of icebergs can have transported these blocks up the very steep eastern

\* See Chap. XII. p. 177, *supra*.

face of the mountain and so over to the other side, but we can imagine the extraordinary action of great waves acting on masses of ice charged with these granitic blocks, and bearing them to a considerable elevation above the then sea-level. We must either grant this, or suppose an elevation of the mountain chain to the westward of the granitic boss since the deposit of the blocks on the top and western side of South Barrule, but of such elevation no independent evidence has been as yet discovered.

There is some reason, as I said, for concluding a gradual elevation again of the island towards the close of the boulder-clay deposit, and that the singular low rounded hills of that formation, which are observable both in the south of the island, and in the north on a line from Point Cranstal to Blue Head, are due to the beating about of the waves and the action of currents at such period. It appears however that when this gradual elevation had proceeded to some extent, there was a long-continued rest, during which the great platform of drift-gravel was deposited, in part formed by the degradation of the upraised masses of the previous boulder-clay deposit. In this drift there is little or no clay; coarse sands alternate with beds of gravel, and occasionally there are some large foreign boulders in it, especially on the surface.

In some parts of the island (but more especially on the north-western coast between Peel and Kirk Michael) there are appearances as if the boulder clay had been worn down and its surface swept clean before the deposit of the drift-gravel was formed upon it. In other cases the gravel has filled up hollows in the boulder clay, not in horizontal layers, but in layers which are concentric with the bounding surfaces of these depressions, indicating a shallow sea.

On the surface of this drift-gravel, as we have just noticed, we often fall in with large boulders, sometimes

single, at other times several of them together. They are also occasionally met with on the tops of the low hills of the boulder deposit, and on the eastern slopes of the mountains: they have been most probably dropped on the melting of drift-ice which has grounded.

The elevating process seems again to have set on after a time, and during that elevation there was considerable denudation of the drift-gravel. The great depression now occupied by the Curragh in the north of the island, seems to have been formed at this period; the valleys of St. John, Baldwin and Spring Valley in the centre, and the long valleys in the south, are evidently coeval and originated by like causes. They have assumed their present form, as is very readily perceived, in consequence of the particular arrangement of the subjacent palæozoic rocks, forming natural breakwaters in particular localities, and preventing the removal of the gravel by the beating of the waves at the period of elevation. In the unprotected places, the denudation has proceeded down to the boulder clay, which, from being in its lower portion of a rather tougher texture, has resisted the denuding action longer, though in some instances the denudation has proceeded to the surface of the older rocks.

It will perhaps be always impossible to determine the extent to which the elevation of the sea-bottom continued.

My own conviction is, that the greater portion of the area now occupied by the Irish Sea became dry land, and formed extensive plains occupied by many freshwater lakes. There is no reasonable ground for doubting that the Isle of Man became connected by such means with England, Scotland and Ireland. Over these plains roamed the stately Megaceros, and in these lakes he was frequently mired\*.

\* See Chap. VII. *supra*, p. 81.

At the same time England would be united with the continent of Europe, and opportunity would be given for the emigration into the British Isles of the various tribes of animals which appear to have inhabited them at this period. Professor E. Forbes has most elaborately worked out the same result from considerations of the flora of the British Isles, as compared with foreign types\*.

What ages may have elapsed with such a condition of land and water in this portion of the northern hemisphere! The inland lakes became filled up with alluvium and peat by the ordinary and slow operations which we see now going on, and vast forests of oak, pine, ash and birch grew up and covered the surface of the country.

We have however further evidence that a depression of this area again took place. The forests were overthrown perhaps by the incursion of the sea, and covered by marine deposits. The different races of animals then existing were perhaps in part destroyed, the remainder betook themselves to the higher grounds and the mountains, and became isolated.

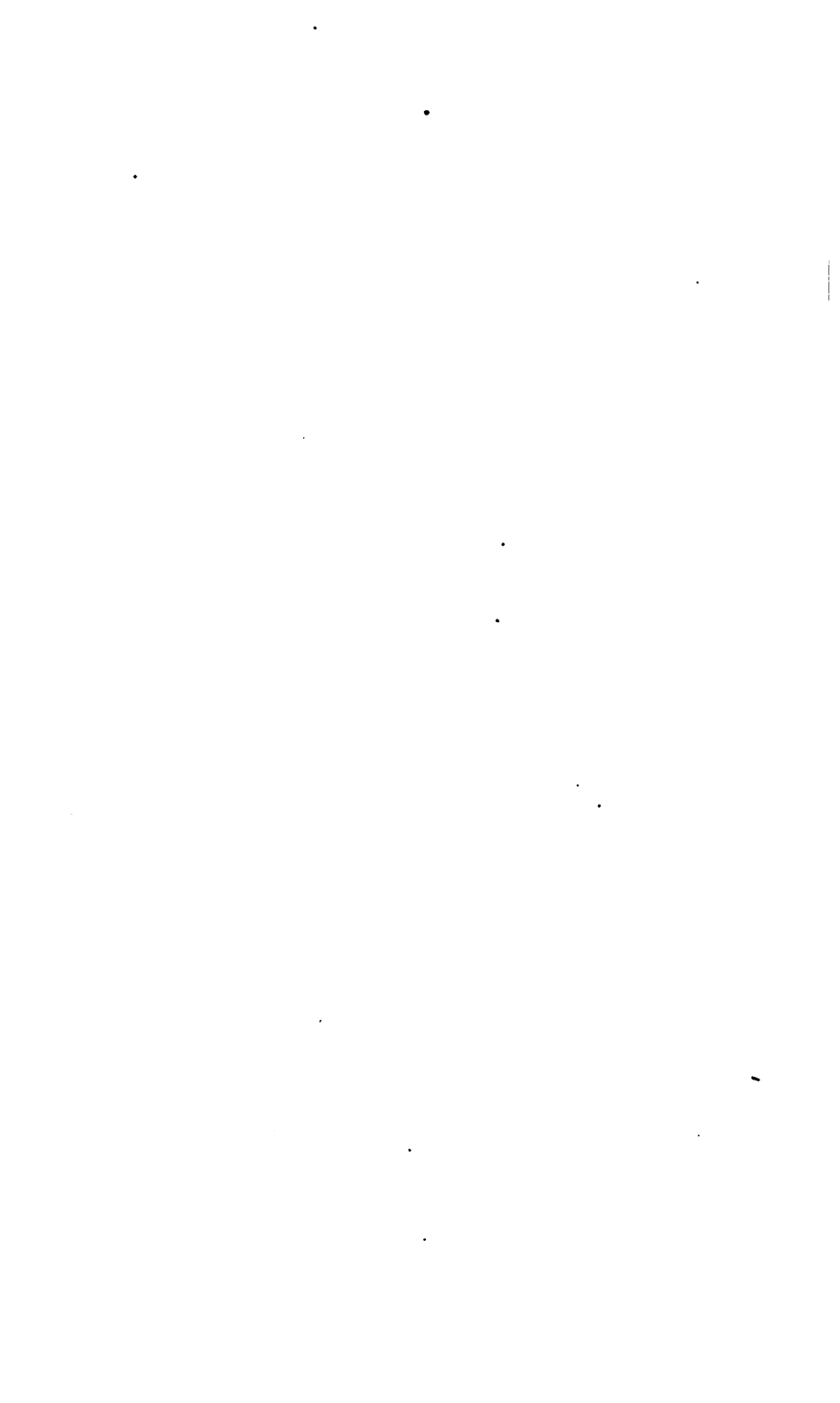
Perhaps amongst them the *Megaceros Hibernicus* may be included, though we have not as yet any distinct evidence of his existence after the growth of the great forests. Further immigration from the continent of Europe was then stopped.

But again the elevatory process commenced, a process which may be slowly carried on up to the present time. The submerged forests have again in part re-appeared above the waves of the sea. The Curragh and the lakes it contained, as also those in the south of the island of which we have historical records, have been one after the other drained; land has been reclaimed from the sea in the open-

\* See his valuable paper on the Flora of the Isle of Man, Appendix S.

ings of some of the alluvial valleys, though the work of destruction still proceeds, aided by the ordinary atmospheric operations of wind, rain and frost at more exposed portions of the tertiary formation, where it presents cliffs to the action of the breakers\*.

\* For a report of the Meteorology of the Island, see Appendix, Note T.



## APPENDIX.

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### A. Page 1.

THE names which have been given at different times to this navel of the Irish Sea, as Gildas calls it, are as various as the methods of spelling that under which it is now generally known. The following notice in Camden is interesting :—" More northward lieth that Mona whereof Cæsar maketh mention, in the mids of the cut, as he saith, betwen Britain and Ireland. Ptolemee termeth it Moneda, as one would say Mon-eitha, that is, if I may be allowed to conjecture, the *more remote* Mona, to put a difference between it and the other Mona, *i. e.* Anglesey. Plinie Monabia, Orosius Menavia, and Bede Menavia Secunda, *i. e.* Second Menavia, where he termeth Mona or Anglesey Menavia Prior, *i. e.* former Menavia, and calleth them both islands of the Britons, in which writers, notwithstanding, it is read amisse, Menavia. Ninius, who also goeth abroad under the name Gildas, nameth it Eubonia and Manau, the Britons Menow, the inhabitants Manning, and we Englishmen the yle of Man."—Folio Edition, Scotland, p. 203, letter E.

The translator of ' Polydore Vergil ' says, " There are manie iles adjacent to Britayne, and two of indifferent fame,—the one called the Isle of Wighte beinge against the south bancke of England ; the other ilond, beinge somewhat famous, is the Isle of Mone, or Man, by the exchaunge of one letter, which one the north side enclineth toward Scotlande, south-eastward towards Englund, on the weste towards Irelande. In olde time, whensoever there appeared decrease or ebbe in



the ocean, it was divided with so small a sea, and was so near with the lande, that a man might have gone thereunto without shippinge, which thinge (as Cornelius Tacitus recordethe) was donne of the Romaines. There are some which dare affirme that yt is the Ile of Mone which men call Anglesea, beinge nearer Walles."

The inhabitants themselves call the island Mannin or Ellan Vannin (Isle of Mann). Amongst the derivations of the name we may note the ingenious one of Bishop Wilson, who says, "The Isle of Man very probably had the name it goes by now from the Saxon word mang, *among*, as lying almost at an equal distance between the kingdoms of England, Scotland, Ireland, and Wales."

Mr. Feltham (copying from Mr. Quayle's MS.) says, "Some suppose the word to originate from *Maune*, the name of St. Patrick, the apostle of the island, before he assumed that of Patricius." It is however hardly necessary to observe, as destructive of both these derivations, that the name Mona, from which Man is clearly taken, was applied to the island long before the days of St. Patrick, or the Saxon occupation of England. It is in ancient British that we must look for the derivation, and the word Môn, and *isolated* may be adduced as a not improbable root. I am however myself inclined to derive it from 'Maen,' *a pile of stones or rocks*; the rather from observing that in other instances this word has passed through similar changes to that which we see in the name of this island. Whilst we have in Wales 'Pen-maen-mawr' (Great head-stone), 'Maen-twrog' (the stone of Twrog), and so on, in which the root occurs; a pile of stones as a mark on the top of a mountain which the Welsh call Maen is in Cumberland (the land of the Cymry, Cimbri or ancient Britons) called *Man*. Whilst we have Caernarvon (Caer-yn-ar-fon), *the fort over against Mona*, i.e. Anglesey; close by it is the Menai Strait (the strait of the *water of Mona*), in which the letter "e" of Maen seems retained\*. By inspecting the following

\* There is in the Baltic an island called Moen.

table the character of the different changes will at once be perceived :—

Cæsar and Tacitus .....	Mona.
Ptolemy .....	<i>Μοναοῦδα, Μοναρία, Μονα νήσος.</i>
Pliny .....	Monabia.
Orosius .....	Menavia.
Bede .....	Menavia secunda.
Gildas .....	Manau and Eu-δδν-ia.
Britons .....	Menow.
Manx .....	Mannin.
English .....	Man.

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### B. Page 12.

On the title-page to Mr. Feltham's 'Tour through the Isle of Man in 1797 and 1798,' is given a view of a round battlemented tower which stood at the extremity of the Pollock-rock, which forms a kind of jetty at the entrance to Douglas Harbour; it was pulled down in 1818 as inconvenient. Waldron attributes its erection to the Romans. In the centre of it was a small round tower rising up above the rest of the building, which is said to be a peculiar feature in presumed Pictish raths. It was at any rate, whether Roman or Pictish, a most interesting memorial of the earliest days of the Isle, and might well have been permitted to remain whilst time would let it\*.

Though remains of the Romans on the island are few and of a very uncertain character, there is every probability that they were at one time masters of it†. On their departure

\* The fort is thus mentioned in Mr. Quayle's MS. History of the Isle of Man :—" Douglas hath alsoe a most considerable fort strongly built of hard stone round in forme, upon which are a mounted tower, and four pieces of ordinance. It is commanded by a Constable and Lieutenant. The Constable and two of the soldiers (which are there in continual pay) are bound to lye in this fort every night; and four of the townsmen are bound to keep watch and ward upon the rampart betwixt the fort and the towne."

† Sacheverell states that he puts no faith in a story quoted in Mr. Quayle's MS. out of John Capgrave's Life of Joseph of Arimathæa, viz. that

from Britain it fell into the hands of the Scots. Camden quotes a passage from Gildas to the effect, that in the reign of the Emperors Arcadius and Honorius (A.D. 395) a Scot of the name of Brule, or Brude, had possession of the Isle. This agrees very well with the statement of Chaloner, that this "island was first of all inhabited by the ancient Scots, that is to say, by the Irish or Highlanders of Scotland."—Chaloner, chap. iv. p. 9. They seem to have had quiet possession during the whole of the fifth century, in which period the island was visited by the mission of St. Patrick\*, and the Church settled under the Bishops Conindrius, Romulus, Maughold and Germanus.

At the commencement of the sixth century it seems to have shared in the troubles of the surrounding countries, for we learn from the 'Annals of Ulster,' that in A.D. 503 there was war in Man under the conduct of Aodan, or Aydon; and Sacheverell notices from the 'Antiquities of Glastonbury,' that "about A.D. 520 King Arthur conquered this Isle, which he generously restored to the native prince, and afterwards admitted him among his Knights of the Round Table."

The more probable story however is that related in Rowland's 'Monastic Antiquities,' viz. that Maelgwyn, nephew to Arthur, conquered the island from the Scots, and as an acknowledgment of his valour was admitted a Knight of the Round Table. It was however recovered from his son Rhun by Aydon M'Gabhra, king of Scotland, in A.D. 581 (according to the 'Annals of Ulster'), who appointed his sister's son Brennus (styled by Buchanan "Brendinus Regulus Euboniæ") to be

"one Mordraius, a king who delivered St. Joseph (at his first coming over into England) out of prison in Venedotia, i.e. in North Wales, by whom he was converted, governed the Isle of Man, A.D. 63. The city where he resided in Man was called Saracta." This story may have originated in the common confusion of the two Monas.

\* He is said to have expelled the reputed necromancer Mannanan-beg-mac-y-Lheir, whom Manx tradition indicates as the Father, Founder, and Legislator of the country, "who exacted no tax or subsidy from the people, but only the hearing of rushes to certain places called Warreffield and Mame on Midsummer even."

his viceroy. Brennus, as Sacheverell states, hearing that his uncle was hard beset by the Picts and their confederates, raised what forces he could for his assistance, and in the year A.D. 594 was slain fighting at the head of his Manxmen, and with a prodigious slaughter of the enemy, left a bloody victory to his uncle.

We have no clear intimation as to the successor of Brennus in the viceroyalty of Man, though it is not altogether improbable that Aydon appointed his own son Eugenius to that office, since we find (according to Sacheverell) that when Eugenius shortly after succeeded to the crown of Scotland, in memory of his own kind reception on the island, he committed his three sons Ferquard, Fiacre and Donald, to be educated under Conanus Bishop of the Isle.

About thirty years after the death of Brennus, we find that Edwin king of Northumberland, following up his success against Cadwallon, a Welsh prince who had invaded his territory, got possession of the Isle of Man, which (Sacheverell says) he wrested from the Scots. Afterwards Cadwallon, obtaining aid from France and Scotland, reconquered the territory which had been overrun by Edwin, and seems to have been permitted to retain the Isle of Man as part of the kingdom of North Wales.

On his death, which took place in A.D. 676, the crown fell successively upon the head of his son and grandson, Caldwalader and Roderic, whose youngest son Howell claimed the Isle of Man as his portion of the kingdom. He appears to have been succeeded by Merfyn Frych, whose wife Essylt was niece to Howell and daughter of Cynan Tindæthwy king of North Wales; so that on the death of Cynan he united again the sovereignty of North Wales and Man in his own person\*.

In the 'Annals of Ulster' we read that in A.D. 841, two years before the death of Frych, a fleet from Man entered the Boyne, which would lead us to infer that he was engaged in making additions to his kingdom. His son Rodic Mawr (Roderic the

\* See Rowland's Monastic Antiquities, p. 173.

Great) was one of the greatest princes of his day, his territory including North and South Wales, with Powysland, Anglesey and the Isle of Man.

On his death a partition again took place between his three sons Cadell, Aberfyn and Anarawd; the last succeeding to the sovereignty of Man.

Towards the close of his reign the Northmen (Dubh Gáls and Fin-Gáls, i. e. Black Foreigners and White Foreigners) seized one after another upon the Isles in the west of Scotland, making continual descents upon the neighbouring countries. Amongst them the most notable was Gorree, Orrey, or Orry, who, in the beginning of the tenth century, having conquered the Orcades and Hebrides, arrived on the shores of the Isle of Man with a fleet of strong ships, and landed at the Lhane in the north of the island. To him we are indebted for the Scandinavian character of the constitution of the island. He established the House of Keys, the Meeting of Tynwald, and the division of the Isle into six sheadings. His son Guttred, the founder of Castle Rushen in 947, succeeded him. I have called him a Scandinavian\* hero from the circumstance of the introduction of Scandinavian customs by his father Orry, whose true origin (probably Icelandic) is unknown, though he is generally called Danish.

We have then a succession of princes given us by Sacheverell in the following order:—Reginald, Olave, Olain, Allan, Fingall and Goddard, of whom little is known to their credit; but the next in order (A.D. 973), Macon or Hacon, makes a figure in history, and is conspicuous as a naval commander in the days of the Anglo-Saxon Edgar. He was one of the petty kings (eight in number) who on the river Dee rowed in the royal barge, Edgar (“Rex soli et sali†”) holding the helm‡. Spelman calls him the Prince of Seamen (“totius Angliæ Archipirata”), and states that his fleet consisted of 3600 ships of war, which annually sailed round the shores of Great Britain to free

\* Chap. IV. p. 34, *supra*.

† Mr. Quayle's MS., p. 4.

‡ Hume's History of England, chap. ii.

them from pirates. His name also (Macusius, as Spelman writes it) appears in the charter of Glastonbury\* subscribed immediately after the king of Scotland. Camden states that he was not only king of Man but of many other isles, and places his date about A.D. 960†. From him it would seem the ancient arms of the Isle of Man were adopted, viz. a ship in her ruff (in full sail) with the motto "Rex Manniæ et Insularum," which arms Camden states he had seen on a seal belonging to the king of Man‡. These continued in use till the Scottish conquest (A.D. 1270), when by Alexander III. they were exchanged to the present arms, which are,—Gules three armed-legs proper, conjoined in fess, at the upper part of the thigh flexed in triangle, garnished and spurred topaz, with the motto "Quocunque jeceris stabit§" surrounding it in a garter. The motto has been singularly appropriate to the island, for after all the tossings about from one master to another, it has had the felicity to drop upon its legs, and has retained to the present time its ancient peculiar and independent constitution.

The date of the death of Macon has not been preserved, but as we read in the 'Annals of Ulster' of a battle in Man in 986 between Godred or Goddard M'Harald and the Gáls, and as we learn also from the 'Irish Annals' that Macon was a son of Harald, it seems very probable that about this time Goddard was occupying the throne which had previously been possessed by his brother Macon. Sacheverell however, with some evident misgivings, names Syrach as holding the kingdom about the beginning of the eleventh century, and says he was succeeded by his son Goddard, who was king so late as 1065. The following list, as given by Mr. Train from Skenes's 'Highlanders of Scotland' and the 'Irish Annals,' is evidently more correct.

Goddard was succeeded in 996 by his son Reginald, upon whose death in 1034 his nephew Suibne|| came to the throne.

\* Sacheverell's Account, p. 27.

† Mr. Quayle's MS., p. 4.

‡ Britannia, p. 24.

§ "Whichever way you shall have thrown it, it will stand."

|| Skenes's *Highlanders of Scotland*, part 2. chap. ii.

Suibne appears to have been slain in defending his territory against Torfin, Jarl of the Orkneys, in 1034; and in 1040\* we read of Harold, a king of Man, dying at Duncha in Ireland, and being succeeded by Goddard, son of Sygtrig†, king of the Danes in Dublin.

During the whole of this century a very close connection had existed between the Danes of Dublin and those of the Isle of Man; they seem to have been bound together by a league offensive and defensive; and the sovereignties of Dublin and of Man were either held by one and the same person, or by members of the same family.

The close of it however saw a change in the line of kings who exercised this sway. Goddard Crovân (called also Chroubân, Crownan and Cronan‡), the son of Harold the Black of Iceland, having been amongst the forces of the Norwegian monarch Harald Harfager, which were beaten by the Anglo-Saxon Harold at Stamford Bridge, A.D. 1066, took refuge in the Isle of Man, where he was kindly entertained. Goddard, the reigning king at that time, seems to have incurred the odium of his subjects, and Goddard Crovân determined to take advantage of this feeling. He returned to his own country, and raising a great fleet, shortly after invaded the Isle, where he found Fingall, the son of Goddard, occupying the throne in place of his father just deceased. After two repulses§ he was successful, and established himself on the throne, Fingall being slain in battle along with Sygtrig M'Olave king of Dublin and two O'Brians in 1077||.

After his conquest of Man¶, Goddard Crovân made himself

\* Annals of Ulster.

† In the 'Chronicles of Man' he is called the son of Sygtrig, though Mr. Train, from the 'Annals of the Four Masters,' states that he was brother to Eachmarcach, son of Reginald king of the Danes, who was driven from Dublin, A.D. 1052, by Dermid, son of Maihambo king of Inisgall, Dublin and Munster.—Train's History, vol. i. p. 70.

‡ See Chap. V. p. 45, *supra*.

§ See Chap. XIV. p. 227, *supra*.

|| According to the 'Annals of Ulster,' A.D. 1073.

¶ See Chap. V. p. 45, *supra*.

also master of Dublin and a considerable portion of Leinster. He also (as the 'Rushen Chronicle' tells us) humbled the Scotch to such a degree that no ship-builder durst use above three bolts in any vessel.

On his death, after an uncertain reign\* of sixteen years, Lagman (A.D. 1104), the eldest of his three sons, mounted the throne, which he was forced again to vacate†, and the youngest son of Goddard Crovân, Olave the Dwarf, was unanimously elected (A.D. 1114) to supply his place. To him is due the foundation of Rushen Abbey and the tripartite division of the insular tithe; he is highly extolled for his amiable character and the general mildness of his reign, yet he perished by the hand of an assassin, and that assassin his own nephew Reginald, the eldest of the three sons of that Harald whom Lagman had so barbarously mutilated. These three had entered into a conspiracy to dethrone Olave; uniting with themselves several disaffected persons, they demanded a moiety of the kingdom as the children of an elder brother. Olave appointed a conference on the day of the festival of St. Peter and St. Paul (A.D. 1154‡), on which occasion Reginald stepped forward under pretence to salute the king, and with one blow of his axe severed his head from his body.

Olave left by his wife Affrica, daughter of Fergus Lord of Galloway, a son, Godred the Black. He left also an illegitimate family, Reginald, Lawman and Harald, with several daughters, one of whom was married to Somerled, prince of Argyle, which proved highly injurious to the monarchy, through the machinations of her sons Dubh Gal, Reginald, Aongus and Olave.

Godred the Black had been educated at the court of Norway; on his return he was at once acknowledged successor to his father. He caused his father's murderer Reginald to be put to death, and the two younger brothers to be deprived of their eyes. In the third year of his reign the people of Dublin invited him to

\* See Chap. V. p. 46, *supra*.

† Ibid. p. 47.

‡ According to the *Chronicon Manniæ*, A.D. 1142.



be their king (A.D. 1155) on the death of Reginald king of the Danes. Ottar, who had been his competitor for the crown having been slain, bequeathed to his son Torfin an intense hatred against Godred. Torfin entered into an alliance with Somerled to place his eldest son Dubh Gal on the throne of the Isles. The hostile fleets met in Ramsey Bay on the eve of the feast of the Epiphany, 1156, and though success was not determinate to either, the ultimate result was a division of the kingdom of the Isles\*, Godred retaining only the Isle of Man. Two years after Somerled made a second expedition against Godred, and possessed himself of the Isle of Man. Godred fled to Norway, where he resided six years, till the death of Somerled in 1164, when he returned to take possession again of his throne in Man. Here he found his natural brother Reginald prepared to dispute the sovereignty. A battle was fought at Ramsey, in which Reginald was successful; a second, which took place four days after, reversed the scales. Godred regained his kingdom, but had the cruelty to mutilate his brother, and put out his eyes.

Godred being resettled in his kingdom, took to wife Fingala, daughter of MacLauchlan king of Ireland, but the marriage not having been canonically performed (A.D. 1176), Viranus, Apostolic Legate from Pope Alexander III., came into Man and caused the marriage to be solemnized afresh, when his son Olave was three years old†. On this occasion the king gave to Sylvanus, the Abbot who performed the ceremony, as an expiation of his error, a piece of land at Mirescogh in Lezayre, which afterwards became the property of Rushen Abbey.

Godred died in a good old age, in the year A.D. 1187, on the 10th of November, in St. Patrick's Isle, and the year after his body was translated to the island of Iona. Godred left besides Olave two older illegitimate children, Reginald and Ivar. In his lifetime he had nominated Olave his successor, who being only thirteen years old at the time of his father's death, Regi-

\* See Chap. XIV. p. 232, *supra*.

† Sacheverell's Account, p. 44.

nald was invited (A.D. 1188) to occupy the throne during his minority. Olave was of a peaceful disposition, and when he found his illegitimate brother disinclined to surrender the kingdom to him when of full age, rather than lose all he accepted the Isle of Lewis as his moiety of the kingdom of the Isles. This isle, mountainous and barren, he found utterly insufficient for his maintenance. On petitioning Reginald for an extension of the grant, he was invited to an audience, traitorously seized (A.D. 1208), and sent a prisoner to William king of Scotland, where he was kept in durance seven years, till the death of that monarch and the kindness of his successor Alexander opened his prison-doors.

On his liberation he came to Man, and soon after went on a pilgrimage to the shrine of St. James of Compostella. At a subsequent period we find an apparent reconciliation between Reginald and Olave, and the latter again accepting the Isle of Lewis. It is however very clear that the usurper Reginald felt the crown of Man sitting uneasily on his brow, as we find him casting about on all sides for helps and alliances. In the sixth year of his reign John of England took Reginald into his protection, and granted him a knight's fee in Ireland, "*pro fœodo et servitio suo*\*;" and in 1219 Henry III. granted to him letters of safe conduct to come into England to do him homage for his crown. Yet, as if this were not sufficient security, he determined on imitating John of England in submitting himself to the Pope, and making to him a surrender of his usurped kingdom. The act of his surrender to Honorius III. is given in Appendix F. Yet it was all to no purpose; Olave daily gained ground in the affections of the people, and on his presenting himself (A.D. 1224) in the Isle of Man, under the conduct of Paul Balkason, Sheriff of Skye, Reginald was glad to yield to him one-half the kingdom of the Isles. Afterwards, the Manx, disgusted with the duplicity of Reginald, who had now held the kingdom thirty-eight years, sent for Olave, and

\* Sacheverell, Account, p. 51.

placed the crown on his head. After two years Reginald made an attempt to regain possession, and after some severe struggles the contest was at length decided at the Tynwald Hill, on St. Valentine's day, 1229, when the party of Reginald was defeated and himself slain.

The year following Olave repaired to the court of Norway, and did homage to Haco Hagenson the reigning monarch. Olave occupied the throne for nine years after the death of Reginald, and died on the 21st of May 1237, leaving three sons, Harold, Reginald, and Magnus.

The first of these at the age of fourteen came to the throne, and wielded the sceptre ten years. He perished by shipwreck on his return from Norway in 1248\*.

His successor, Reginald, was murdered by the knight Ivar† the year following, and it was not till the year 1252 that Magnus, youngest son of Olave, gained possession of the throne. He was the last of the race of Goddard Crovân who swayed the sceptre of Man. He died in 1265, having done homage to Alexander III. of Scotland.

The year following, Magnus VI. of Norway, successor to Haco Hagenson, ceded to the king of Scotland and his heirs the Isle of Man and the Hebrides, with all the rights and privileges belonging to the said island, without any restraint, along with the Episcopacy of Man, the lands, jurisdictions, and liberty of the church of Nidrosien, in every thing that he possessed in the Episcopacy and Church of Man; the composition to be paid by the king of Scotland being fixed at 4000 marks sterling, in four yearly payments of 1000 marks each, and an annual pension (called by the Norwegians a tribute) of 100 marks per annum. This treaty was done at Perth on the Friday after the feast of St. Peter and St. Paul, A.D. 1266.

It was not however till four years after this that the Scotch gained possession of the island, when King Alexander placed in it a succession of Thanés as governors, of whom Godred

\* See Chap. VIII. p. 101, *supra*.

† *Ibid*.

M'Manus was the first ; after him Allan ; then Maurice, Okefair, Brennus and Donald \*. In 1290 Edward I. took possession of the island on its surrender by Richard de Burgo, and gave letters-patent, 4th June 1290, to hold the same to Walter de Huntercomb, who the year following surrendered it by King Edward's order to John Baliol king of Scotland, to be held by him as a fief from the crown of England.

The history of the Isle of Man for the next fifty years is extremely complicated, arising partly from its connection with the crown of Scotland, and partly from the circumstance of there being two lines of succession by the female side of the family of Goddard Crovân, each claiming an interest in the crown of Man.

Mary, the daughter of Reginald, last king but one of the race of Goddard Crovân, on the death of Magnus had been secretly conveyed away from the island, with all the public deeds and charters. She appears to have been married to the Earl of Strathern, and afterwards to John de Waldebeof.

Whilst King Edward I. was at Perth, adjusting the difference between Bruce and Baliol, competitors for the crown of Scotland, she put in her claim for the Isle of Man, and offered to do homage to him for it, but was referred to Baliol. She died whilst prosecuting her claim, and her right descended to William her son and heir, and from him to John his son, who presented his petition in Parliament to King Edward in the thirty-third year of his reign (A.D. 1305), and was referred for a hearing in the King's Bench.

The rival claim to the throne of Man arose from Affrica, younger sister to Magnus, the last king of Man, and therefore aunt to the aforesaid Mary, daughter of Reginald. In a deed

\* Okefair's successor is said in Mr. Quayle's MS. to have been Chaplain of King Alexander. The conduct of Allan was so tyrannical that the Manx rose in a body against the Scottish Government. By the intervention of the Bishop, the whole matter was referred to the result of a combat of thirty champions on each side. The Manx lost the day, five of the Scots surviving when all the Manx champions were slain. Allan was pressed to death by the people.

of gift, dated at Bridgewater in Somerset (A.D. 1305), in which she styles herself "Aufrica de Connoght heres de Man," she made over the island to Sir Simon de Monte Acuto (Simon Montacute), from whom a claim thus descended to his son Sir William Montacute, who is said to have mortgaged it for seven years to Anthony Beck, Bishop of Durham and Patriarch of Jerusalem, which Bishop obtained also a grant of it for life from Edward II.

On the death of that prelate, March 3, 1311, the rival claim to the Isle of Man appears still to have been entertained by the Montacute family. This rivalry was however at length happily set aside by the union of the two contesting families in the persons of Sir William Montacute, Earl of Salisbury (son to the last-mentioned Sir William), with Mary, daughter of William de Waldebeof, and therefore great-granddaughter of Reginald, the son of Olave the Black. This appears to have taken place in 1343, through the influence of Edward III., who furnished to the Earl of Salisbury men and means for the conquest of the island from the Scotch, who then had it in possession. During the period in which this contest had been going on between the two branches of the family of Goddard Crovân, the kings of England and Scotland, as each had possession of it, seem to have disposed of this island to other parties, according to their own pleasure.

In the beginning of the year 1307, Edward I., dispossessing Henry de Beaumont, granted the custody of the island to Gilbert de MacGaskill, and he was allowed by Parliament the sum of £1596 0s. 10d. for his expenses, being £1215 3s. 4d. for the cost of defence against the Scots, and £380 17s. 6d. furnished by him for provisions to the Governor of Carlisle.

King Edward I. died July 7th of that same year. His son within the period of the year following made no less than three grants of the island to as many of his favourites, viz. Piers Gaveston of Gascony, Gilbert de MacGaskill, and Henry de Beaumont; but it is doubtful if any of them ever actually had possession; and if they had, the party of Bruce very soon began

to contest it with the nominees of the English king ; and in 1313 we read that " Robert Bruce himself sat down before Castle Rushen, which for six months was obstinately defended by one Dingay Dowyll\*, though in whose name we do not find†." And not long after it was granted to Robert Randolph, Earl of Murray, afterwards regent of Scotland‡. At this time John de Ergadia, who had married a daughter of the Red Comyn, and had large possessions in the Isle of Man, was forced to flee with his family into Ireland, as from espousing his father-in-law's side he was obnoxious to the family of Bruce. He afterwards returned with some forces, and expelled the Scots in the king of England's name.

It is evident however that again the Scots gained possession from the circumstance before noted, that Sir William Montacute was obliged to win the island from them.

It was whilst Murray held the island, that Martholine, almoner to the king of Scotland, was sent over in the year 1329 to take care of the business of religion and reformation of manners. Sacheverell tells us that he wrote a work against witchcraft, then greatly practised here, and minted a copper coin, with the king's effigy on one side and a cross on the other, with the inscription, "Crux est Christianorum gloria§."

The Scotch during their tenure of the island appear to have been regarded by the Manx with intense feelings of hatred, and these feelings continued long after their expulsion. A law was passed in 1422||, "that all Scots avoid the land with the next vessel that goeth into Scotland, upon a paine of forfeiture of their goods, and their bodies to prison."

In the year 1344 Sir William Montacute was solemnly

\* Dugal Macdouall.

† Sacheverell's Account, p. 71.

‡ The Randolph family quartered the arms of Man upon their escutcheon; and it was from the circumstance of this short possession of the island that this same device appeared upon the shield of the Duke of Albany, who was created from that family in 1398. See Train's History, vol. i. p. 149.

§ Sacheverell's Account, p. 72.

|| See Mill's Statute Laws of the Isle of Man, p. 27.

crowned king of Man, but the family seem to have held the island by an uneasy tenure ; and in the year 1393 the Earl of Salisbury sold it to Sir William Scroop\*, the king's chamberlain, afterwards Earl of Wiltshire, on whose attainder and execution in 1399, Henry IV. granted the Isle to Henry Percy, Earl of Northumberland, to be held by him on the service of carrying the sword of Lancaster on the day of the coronation of the kings of England.

He was four years after, on his attainder, deprived of it again by Act of Parliament, and in the seventh year of his reign the king granted it to Sir John Stanley for life only. Subsequently (A.D. 1406) he extended the grant to him in perpetuity, in as full and ample a manner as it had been granted to any former lord to be held of the crown of England, by paying to the king, his heirs and successors, a cast of falcons at their coronation. He died in the beginning of 1414, being at the time Lord Lieutenant of Ireland, "a man truly great and an honour to his country."

He was succeeded by his son Sir John Stanley, who came into the Isle in the year 1417, and in the June of the same year convened a meeting of the whole island at the Tynwald Hill, on which occasion were promulgated the laws which appear first in the Statute Book of the island.

He held subsequent Tynwald Courts, either in person or by his lieutenants, in the years 1422, 1429 and 1430, in which important alterations were made in previous laws and new ones enacted ; amongst the former, "prowess or trial by combat," which had hitherto been allowed, was henceforth abolished. His death took place in 1432, when he was succeeded by Sir Thomas Stanley, his son, created (A.D. 1456) Baron Stanley by Henry VI. ; after whom succeeded (A.D. 1460) Thomas his son, created first Earl of Derby by Henry VII. in 1485. He married Margaret, daughter of the Duke of Somerset and Dowager-duchess of Richmond, and mother of Henry VII. He is remarkable in English history as having crowned the

\* For the terms of sale, see p. 193, *supra*.

Earl of Richmond immediately after the battle of Bosworth Field. In 1505 he was succeeded by Thomas his grandson, who resigned the regal title under the conviction that "to be a great lord is more honourable than to be a petty king\*."

On his decease in 1521 Edward his son was only fourteen years of age, and the island was therefore during his minority under a commission, consisting of the Bishop, the Lieutenant-governor, the Archbishop of York, and the Chancellor of England.

After his accession to the Lordship of the Isle, he lived forty-four years, in the reign of Henry VIII., Edward VI., Mary and Elizabeth, and saw through the eventful period of the Reformation. He died October 24th, 1572.

Henry his son succeeded him as fourth Earl of Derby. He appears in all his acts to have been a strenuous supporter of the Reformation, which hardly was carried out in the Isle of Man during the life of his father. He was a bitter enemy of Mary Queen of Scots, and was appointed one of the Commissioners for her trial at Fotheringay. He died September 25th, 1594, leaving two sons, Ferdinand and William, of whom the latter had been Governor of the Isle the year before his father's death.

Ferdinand, the elder son, succeeding to the Lordship of Man in 1594, was poisoned by his servant in the beginning of the following year, upon which his younger brother William, endeavouring to take possession, found his claim contested on behalf of the four daughters of Ferdinand, who had left no son.

Queen Elizabeth appointed a commission to determine the question; in the mean time taking the island under her own protection, and appointing Sir Thomas Gerrard Governor. When James I. came to the throne, he seems to have taken advantage of the doubts created as to the rightful heirs to make

\* See Earl of Derby's Letter to his son in Peck's *Desiderata Curiosa*, vol. ii. p. 436.



grants of the island at different times to other parties not connected with the Derby family. Perhaps he may have been led to this from a consideration of the feeling shown towards his unfortunate mother by Earl Edward.

After years of litigation the result was given in favour of the female succession, but a compromise being entered into between the daughters of Ferdinand and their uncle, an Act was passed in 1610, assuring and establishing the Isle of Man in the name and blood of William Earl of Derby, who then entered upon possession. Towards the close of his life, being desirous of retiring from public business, he by deed of gift (A.D. 1637) to his son James, Lord Strange, placed in his power the Isle of Man and all his other estates, on condition of the payment to himself of an annuity therefrom of £1000. Earl William died in 1642.

James some time before this deed of gift had visited the Isle of Man, and took order for the settling the Government. His name appears connected with the acts of Tynwald passed in 1629 and 1636. The conduct of this noble earl during the civil war is fully detailed in Appendix G. *infra*, and the particulars of his execution at Bolton in 1651 are there given. His estates were taken possession of in the name of the Parliament, and after the reduction of the Isle of Man by Colonel Duckenfield, it was granted to Lord Fairfax as an acknowledgment of his great services.

In 1652 Fairfax appointed James Chaloner and Robert Dinely, Esquires, and Jonathan Witton, Clerk, as his Commissioners for the government of the Isle.

At the Restoration, the Isle of Man and the other estates of the Derby family which had been sequestrated returned to their right owner, and Charles the eighth Earl of Derby (eldest son of James) became Lord of Man, A.D. 1660. He died in 1672, and was succeeded by his eldest son William, who married Elizabeth, daughter of Thomas Earl of Ossory, by whom he had one son, William (who died in 1700 without issue),

and two daughters, Elizabeth, who died without issue, and Henrietta, who was married, first to John Earl of Anglesea, and afterwards to John Lord Ashburnham. She had two daughters by these marriages, who both died without issue.

On the death therefore of William the ninth Earl, James, a younger son of Charles, became tenth Earl of Derby and Lord of Man in 1702. It was from this Earl that Bishop Wilson obtained in 1703 that great benefit to the island the Act of Settlement, by which the properties of the gentry and land-owners were secured to them for ever on the payment of certain fines, rents and dues to the Lord. He died without issue in 1735, the last of that illustrious family which had governed the Isle of Man for more than 300 years; and then the kingdom of Man devolved on James Murray second Duke of Athol, who was descended from Lady Amelia Sophia, youngest daughter of the noble James, seventh Earl of Derby, who had been married to John Marquis of Athol, his grandfather, all the older branches of the seventh Earl of Derby's family having died off.

This James was third son to John, created first Duke of Athol. His eldest brother, the Marquis Tullibardin, being dead, and the second brother being under attainder in consequence of the part he took in the rebellion of 1716, he succeeded to his father's titles and estates in 1724, and in the year 1736 came in for the Lordship of Man in the manner just stated.

During his reign illicit commerce very rapidly gained ground in the Isle of Man, causing much annoyance to the British Government, who made to him several overtures for the purchase of his rights in the island, but without coming to any conclusion.

James died in 1764, and leaving no male issue was succeeded by his nephew John in the Dukedom. John having also married James's daughter Charlotte, the Baroness Strange, in 1753, became also Lord of Man in his wife's right. The British Government still continuing their overtures of purchase, the Duke, beginning to fear lest if he were too pertinacious of his rights he should lose all without any equivalent, at length agreed to surrender the revenues of the Isle for £70,000, and

an annuity to himself and Duchess of £2000. The title of Lord of Man, the manorial right, the patronage of the Bishopric, mines, minerals and treasure-trove, were still reserved to him on the honorary service of rendering a cast of falcons at every coronation, and the annual payment of a rent of £101 15s. 11d. The Act by which this was accomplished, passed in January 1765, is known by the name of the *Act of Revestment*. This was the third time that the island changed hands by purchase; the two former instances being those of Alexander III. of Scotland, who gained it thus of the king of Norway; and of Sir William Scroop, who bought it of Sir William Montacute.

John, the third duke of Athol, dying in 1774, his son John succeeded to his title and estates. Under the conviction that the family had not received a suitable remuneration for their surrendered rights, he petitioned Parliament in 1781 and 1790 for a further allowance, but without success. At length, in 1805, he obtained a grant of the fourth part of the revenues of the island, afterwards commuted to £3000 per annum for ever. However, in 1825, the Duke acceded to a proposition made to him by the Lords of the Treasury to purchase the whole of his remaining interest in the island for the sum of £416,114; and thus the Isle of Man became entirely and definitely, with all the rights and privileges of the royalty, vested in the British Crown. John, fourth Duke of Athol, died September 29, 1830, in the seventy-sixth year of his age, having been Lord of Man fifty-five years: he had rendered the accustomed service of a cast of falcons at the coronation of George IV.

The following is an analysis of the sum of £416,114 paid by the British Government to the Duke of Athol:—

	£.
For the Customs' revenue.....	150,000
Rents and alienation fines.....	34,000
Tithes, mines, quarries .....	132,114
Patronage of the bishopric, with fourteen advowsons, the aggregate value of which was £6000 .....	100,000
	<hr/>
	£ 416,114

Deducting from the above amount the sum of £100,000, paid for the ecclesiastical patronage which the Crown now holds, we have the residue, £316,114, the interest of which sum at  $3\frac{1}{2}$  per cent. per annum is £11,065.

In order to get at an idea of the value of this purchase to the British Government, and the *surplus* paid to the *Consolidated Fund of the United Kingdom* from the Isle of Man, we have the following balance-sheet, which for convenience is given in round numbers, the amount derived from the Customs being for the year 1846, and the rest an average of five years, the royalties of the mines and quarries being the only variable quantities.

*Isle of Man Revenue.*

RECEIPT.

	£.
Customs' duties on wine, spirits, tobacco, tea, coffee, sugar and timber.....	26,500
Mines and quarries' royalties (average) .....	3,900
Lord's rent, abbey rents, quit rents and fines .....	1,300
Tithes commuted .....	500
<b>Total receipt .....</b>	<b>32,200</b>
<b>Deduct expenditure .....</b>	<b>25,200</b>
<b>Surplus revenue .....</b>	<b>£7,000</b>

EXPENDITURE.

	£.
Civil establishment.—Salaries, expenses of the Government and the administration of justice.....	8,000
Harbours .....	2,300
Collection of Customs, prevention of smuggling, and agent for Woods and Forests .....	3,900
Interest on £416,114 at $3\frac{1}{2}$ per cent. ....	11,000
<b>Total expenditure .....</b>	<b>£25,200</b>

The Isle of Man has (from time immemorial) been governed by its own laws, made and enacted by the three estates of the Isle, viz.—

The King or Lord.

The Governor and Council.

The Twenty-four Keys or Taxiäxi, as the representatives of the inhabitants of the Isle.

These estates, when assembled, are called a Tynwald Court, and their triple concurrence establishes the law, which has force after it has been proclaimed from the Tynwald Hill.

The Council consists of the Bishop, the two Deemsters, the Clerk of the Rolls, the Attorney-General, the Receiver-General, the Water Bailiff, the Archdeacon, and the Vicar-General.

Prior to the year 1846 there were two Vicars-General. The offices of Receiver-General and Water Bailiff are at present held by one person.

Anciently the Abbot of Rushen and the Archdeacon's official had seats in the Council.

The Governor or Lieutenant-Governor is chief both in civil and military power, and has by law authority to call a Tynwald Court as often as he finds necessary, at which the Council and Keys, according to their oaths, are bound to attend.

One clause in the Governor's oath is remarkable:—"You shall truly and uprightly deal between our Sovereign Lady the Queen and her people, and as indifferently betwixt party and party, *as this staff now standeth, as far as in you lieth.*"

The Deemsters are the first popular magistrates, the supreme judges in all civil courts, whether for life or property. The office is of the highest antiquity. It is uncertain whether their name is derived from *to deem* or *to doom*. Formerly, before the laws were written, in all new and emergent cases they were called in to declare what the law was, and the laws so declared were named Breast-laws.

The oath administered to a Deemster when appointed, runs thus:—"By this book, and by the holy contents thereof, and by the wonderful works that God hath miraculously wrought in heaven above and in the earth beneath, in six days and seven nights, I (A. B.) do swear that I will, without respect of favour or friendship, love or gain, consanguinity or affinity, envy or malice, execute the laws of this isle justly betwixt our Sovereign Lady the Queen and her subjects within this isle,

and betwixt party and party as indifferently as the *herring back-bone doth lie in the midst of the fish*. So help me God and by the contents of this book."

There were formerly four baronies within the Isle, for which courts were holden, viz. the Bishop's Barony, the Abbot's or Abbey Barony, the Barony of Bangor and Sabel, and the Barony of St. Trinion.

Till the year 1845 the Bishop and the Archdeacon were members of the Court of General Gaol delivery. Before that time it was retained as an ancient usage, that the Bishop, or some priest appointed by him, should sit with the Governor in the trial of capital cases till sentence of death (if any) was to be pronounced, the Deemster asking the jury, instead of guilty or not guilty, "*Vod fir-charree soie?*" which means literally, "*May the man of the chancel, or he that ministers at the altar, continue to sit?*"

The following is a catalogue of the Governors and Lieutenant-Governors of the Isle of Man since the accession of the house of Stanley:—

A.D.

- 1407. Michael Blundell, Lieutenant.
- 1417. John Letherland, Lieutenant.
- 1418. John Fasakerly, Lieutenant.
- 1422. John Walton, Lieutenant.
- 1428. Henry Byron, Lieutenant. No records till
- 1496. Peter Dutton, Lieutenant.
- 1497. Henry Radcliffe, Abbot of Rushen, Deputy.
- 1505. Randolph Rushton, Captain.
- 1508. Sir John Ireland, Knt., Lieutenant.
- 1516. John Ireland, Lieutenant.
- 1517. Randolph Rushton, Captain.
- 1519. Thomas Danisport, Captain.
- 1526. Richard Holt, Lieutenant.
- 1529. John Fleming, Captain.
- 1530. Thomas Sherburn, Lieutenant.
- 1532. Henry Bradley, Deputy-Lieutenant.

A.D.

- 1533. Henry Stanley, Captain.
- 1535. George Stanley, Captain.
- 1537. Thomas Stanley, Knt., Lieutenant.
- 1539. George Stanley, Captain.
- 1540. Thomas Tyldesley, Deputy.
- 1544. William Stanley, Deputy.
- 1552. Henry Stanley, Captain.
- 1561. Sir Richard Sherburne, Lieutenant.
- 1562. Thomas Stanley, Knt., Lieutenant.
- 1566. Richard Ashton, Captain.
- 1567. Thomas Stanley, Knt., Lieutenant.
- 1569. Edward Tarbock, Captain.
- 1575. John Hanmer, Captain.
- 1580. Richard Sherburn, Captain.
- 1591. Richard Aderton, Lieutenant.
- 1592. { Cuth. Gerrard, Captain.  
      { Thomas Mortimer, Deputy.
- 1593. The Hon. William Stanley, Captain, afterwards  
      Earl of Derby.
- 1594. Randolph Stanley, Captain.
- 1596. { Sir Thomas Gerrard, Knt., Captain. Peter  
      { Legh, appointed Governor by Queen Eliza-  
      { beth in the absence of Sir Thomas Gerrard.  
      { Cuth. Gerrard, Deputy.
- 1597. { Thomas Gerrard, Knt., Captain.  
      { Robert Molineux, Deputy.
- 1599. { Cuth. Gerrard, Captain.  
      { Robert Molineux, Deputy.
- 1600. Robert Molineux, Captain.
- 1609. John Ireland and John Birchall, Governors, con-  
      jointly by patent.
- 1610. John Ireland, Lieutenant and Captain.
- 1612. Robert Molineux, Captain.
- 1621. Edward Fletcher, Deputy.
- 1622. Edward Fletcher, Governor.

A.D.

1623. Sir Fred. Liege, Knt., Captain.  
 1625. Edward Fletcher, Deputy.  
 1626. Edward Holmewood, Captain.  
 1627. Edward Fletcher, Deputy.  
 1628. Edward Christian, Lieutenant and Captain.  
 1634. Evan Christian, Deputy.  
 1635. Sir Charles Gerrard, Knt., Captain.  
 1636. John Sharples, Deputy.  
 1639. Radcliffe Gerrard, Captain.  
 1640. John Greenhalgh, Governor.  
 1651. Philip Musgrave, Knt. and Bart.  
 1651. } Colonel Robert Duckenfield, Governor.  
 1652. }  
 1652. Samuel Smith, Deputy-Governor.  
 1652, Aug. 18, Lord Fairfax made commissioners for  
     the governing the Isle this year, James Cha-  
     loner, Robert Dineley, Esqrs., Jonathan Wil-  
     ton, Clerk.  
 1653. Matthew Cadwell, Governor.  
 1656. William Christian, Governor.  
 1659. James Chaloner.  
     After the Restoration.  
 1660. { Rodger Nowell, Governor.  
        { Richard Stephenson, Deputy.  
 1663. { Henry Nowell, Deputy part of the year, and  
        { Thomas Stanley for the other part.  
 1664. { Bishop Barrow, Governor.  
        { Henry Nowell, his Deputy.  
 1669. Henry Nowell, Governor.  
 1677. Henry Stanley, Governor.  
 1678. Robert Heywood, Governor.  
 1691. Roger Kenyon, Esq., Governor.  
 1692. William Sacheverell, Governor.  
 1696. Colonel Nicholas Sankey, Governor.  
     Hon. Captain Cranston, Governor.



A.D.

1703. { Robert Mawdesley, Esq., Governor.  
       { John Rowe, Deputy.
1714. Captain Alex. Horne, Governor.  
       Major Floyd, Governor.
1726. Thomas Horton, Governor.
1734. James Horton.
1739. Hon. James Murray, first Governor under the  
       Duke of Athol.
1741. Patrick Lindsay.
1757. Basil Cochrane, Esq., Governor.
1763. Captain John Wood, Governor.
1765. The Island sold to the Crown, J. Hope, Deputy-  
       Governor.
1776. Richard Dawson, Lieutenant-Governor.
1777. { Edw. Smith, Esq., Governor-in-Chief.  
       { Richard Dawson, Lieutenant-Governor.
1791. Alexander Shaw, Esq., Lieutenant.
1798. His Grace the Duke of Athol, Governor-in-Chief.
1805. Colonel Cornelius Smelt, Lieutenant.
1832. General John Ready, Lieutenant.
1845. The Hon. Charles Hope, Lieutenant.

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C. Page 15.

The following is a general account of the size of the Isle of Man and its population at different periods.

The centre of the island is in latitude  $54^{\circ} 15'$  north, and longitude  $40^{\circ} 30'$  west.

It stretches out in a direction N.E. by N., and S.W. by S. from the point of Ayre to the Sound of the Calf, distant from each other  $33\frac{1}{4}$  miles.

Its greatest breadth at right angles to this direction, from Banks' Howe to Ballanayre, north of Peel, is  $12\frac{1}{2}$  miles.

The shortest distances from the surrounding countries are,—

From the Calf of Man to Ardglass in Ireland, N.W.  $\frac{1}{2}$  N., 31 miles.

From Peel to Lough Strangford, N.W. by W., 27 miles.

From Point of Ayre to Burrow Head, N.N.E., 16 miles.

From Maughold to Whitehaven, E.  $\frac{1}{4}$  N., 31 miles.

From the Calf of Man to Holyhead, S.S.W., 45 miles.

The number of statute acres in the island amounts to rather more than 130,000, but in consequence of the many indentations and irregularities, it is impossible to calculate closely without a very accurate survey, which has not as yet been made.

The total amount of enclosed and cultivated lands paying tithe is 89,458 acres; the unappropriated Crown lands reach to 30,788 acres, of which—

The northern mountains contain . . . .	19,898
Southern ditto . . . . .	8,495
The Ayre of Kirk Bride . . . . .	1,668
The Ayre of Andreas . . . . .	727

The lands belonging to the Crown are subject to a right possessed by the public to turn sheep out on them, cut turf, and preserve highways, turbaries and watercourses. We may safely allow 10,000 acres for the remaining uncultivated and untithed lands, rocks, waters, and islands; thus bringing the amount of surface to an approximate total of 130,246 acres.

The following table of the heights of the mountains is taken from Dr. Berger's report in the first volume of the Transactions of the Geological Society of London. They were obtained by the barometer.

	Feet.
North Barrule . . . . .	1850
South Barrule . . . . .	1545
Bein-y-Phot . . . . .	1750
Brada Head (highest point) . . . . .	767
Bushel's House (highest point on the Calf Islet) . .	461
Corrin's Tower (on the Horse-hill Peel) . . . . .	675
Cronck-Irey-na-Lhaa . . . . .	1445
Douglas Head . . . . .	315
Douglas Howe . . . . .	466
Greebuh (highest point) . . . . .	1355

	Feet.
Ganaghan .....	1520
Maughold Head.....	475
Mount Murray .....	742
Sartyl.....	1560
Slieauwhallin (highest point) .....	978
Slieau Hearn .....	1533
Slieau Dhoo .....	1215
Slieau-y-Carnaane .....	900
Sneafell .....	2000
Spanish Head .....	350
Santon Head (low point) .....	126
Tynwald Hill.....	130
Watershed, between Port Erin and Port St. Mary .	82

Naturally the island is divided into two districts, a south-eastern and north-western, by the chain of mountains running through it. For civil purposes it is divided also into two districts, a southern and a northern primarily, and these are subdivided into six sheadings, and again into seventeen parishes. Each district has its Deemster or Judge, each sheading its Coroner, and each parish its Captain, Sumner and Moar, *i.e.* collector of Lord's rent. There is another division of the island into the high bailiwicks of Castletown, Douglas, Peel and Ramsey. The High Bailiff has jurisdiction in causes under 40*s.* old Manx currency, equal to £1 14*s.* 3½*d.* British.

The following Table of the population is derived in chief part from Quayle's 'Agriculture of the Isle of Man,' with the addition of the census in 1821, 1831, and 1841.

Districts.	Sheedings.	Parishes.	Chief towns.	Patron Saints.	Population.						Increase since 1726.	
					1726.	1757.	1784.	1792.	1821.	1831.		1841.
Southern.	Rushen ...	Malew .....	Castletown.....	St. Lupus .....	890	1466	1861	3333	{ 2649	2778	3085	2195
		Arbory .....	.....	St. Cairbre .....	785	915	1318	{ 3333	{ 2036	2062	2283	1498
		Rushen .....	.....	Holy Trinity .....	661	785	912	1143	1455	1511	1615	954
	Middle ...	Santon .....	.....	St. Anne.....	813	1007	1451	1590	2568	2732	2979	2266
		Braddan.....	.....	St. Brandon .....	376	507	589	512	800	798	769	393
		.....	.....	.....	780	1121	1214	{ 5045	{ 1754	1927	2122	1342
	Glenfaba...	Onchan .....	Douglas .....	.....	810	1814	2850	{ 5045	{ 6054	6776	8647	7837
		Marown .....	.....	St. Concha .....	370	434	560	690	1457	1482	2589	2219
		German .....	.....	St. Marown .....	499	658	841	842	1201	1216	1318	819
	Garff .....	Patrick .....	Peel .....	St. German.....	510	925	{ 2474	2505	{ 1849	1791	1896	1386
.....		.....	.....	475	805	{ 2474	2505	{ 1909	1722	2133	1658	
.....		.....	St. Patrick .....	745	954	1452	2153	2031	2195	2768	2023	
Northern.	Garff .....	Lonan.....	.....	St. Lomanus.....	547	869	1219	1408	1846	1923	2230	1683
		Maughold .....	.....	St. Maughold .....	525	759	1079	{ 2007	{ 1514	1341	1585	1056
		.....	Ransey .....	.....	460	882	894	2007	1523	1754	2104	1644
	Ayre .....	Lezayre .....	.....	Holy Trinity .....	1309	1481	1680	1721	2209	2657	2323	1014
		Bride .....	.....	St. Bridget .....	612	629	652	678	1001	1039	1153	541
		Andreas .....	.....	St. Andrew .....	967	1067	1390	1555	2229	2217	2332	1365
	Michael ...	Jurby .....	.....	St. Patrick .....	483	467	637	713	1108	1097	1068	580
		Ballaugh.....	.....	St. Mary .....	806	773	871	1015	1467	1416	1516	710
		Michael .....	.....	Michael .....	643	1826	980	1003	1427	1317	1376	733
	Total .....					14,066	19,144	24,924	27,923	40,081	41,758	47,986

## D. Page 45.

*Act of Settlement.*

After Goddard Crovân had conquered the Isle of Man, he divided it between his followers (those who chose to remain with him) and the natives, on the terms that none should venture to claim their holdings as hereditary property, but look upon themselves merely as tenants at will of the king. This tenure was afterwards known by the term "tenure of a straw."

The Stanley family, by the charter granted to Sir John Stanley, were vested with all the rights belonging to any former king in the fullest manner. In the time of James seventh earl of Derby, the people became alarmed on the subject of their holdings, and were prevailed on to enter into an agreement with the Earl to deliver up their property into his hands, and receive them again on leases for three lives. In order the more readily to induce them to this, one of the Deemsters took the lead in the surrender of his lands, having entered at the same time into a private arrangement with the Lord, by which he shortly after obtained an Act of Tynwald reinstating him in his possessions.

A spirit of great dissatisfaction (as might naturally be expected) was consequent throughout the Isle, and this appears to have increased more and more as the lives of the different leases dropped in. Agriculture was in consequence greatly neglected, and the island was in a very languishing and depressed state when James the tenth Earl of Derby became Lord of Man in 1702.

In the year 1703, however, owing chiefly to the great interest of Bishop Wilson with the Earl of Derby, and his earnest representations to him of the state of the island, an Act was obtained which has well been designated the *Manx Magna Charta*.

The Act of Settlement is the name given to "An Act for the perfect settleing and confirming of the Estates, Tenures, Fines, Rents, Suits and Services of the Tennants of the Right

Honorable James Earl of Derby within this Isle of Man." It was drawn up and received the approbation of the Twenty-four Keys and the Council, February 4th, 1703, and being afterwards approved of by the Earl of Derby, received his signature September 6th of the same year. On the 6th of June 1704 it was proclaimed on Tynwald Hill, according to form and custom, and thus became the settled law of the land. Of the part taken by Bishop Wilson in procuring it, we find the following memorandum amongst his papers:—

"Sept. 6, 1703.—Blessed be God for his favours. On this day I was, I hope, an happy instrument in bringing the Lord of Man and his people to an agreement; his Lordship having this day condescended to settle them upon a certain tenure, or rather to restore them to their ancient tenure, which has been uncertain for more than one hundred years. What the consequence may be I know not; but this I know, that I have acted uprightly in this whole affair, which God be praised for!"

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E. Page 50.

In the year 1839, the Crown, the Bishop and the Clergy, agreed to commute the several tithes payable to them for the annual payment of £5575, and since that time the payments have been regulated according to the average price of corn, ascertained according to the prices of barley, wheat, and oats during the seven years preceding each and every payment; and thereby the annual payments are liable to be increased or diminished accordingly. The proportions were regulated by Act of Tynwald.

	Number of acres paying tithe.		Value of the tithe.		Prescriptive payments.		Sum paid to Incumbents.		Glebe lands of Incumbents.	
	A.	R. P.	£	s. d.	£	s. d.	£	s. d.	A.	R. P.
Patrick, V.....	7,344	0 3½	315	3 10½	3	1 10½	141	8 0	43	0 0
German.....	8,863	1 15	533	15 8½	1	8 2½	141	8 0	25	0 0
Marown .....	2,863	0 18	152	4 2½	5	12 8	141	8 0	16	0 0
Michael .....	5,984	0 13	301	14 1	.....	.....	141	8 0	25	0 32
Ballagh, R. ....	4,156	1 26	341	18 4	.....	.....	303	0 0	27	2 0
Jurby .....	4,301	2 21	448	5 3½	.....	.....	141	8 0	32	3 37
Andreas .....	6,936	1 29	842	12 8	1	13 0	707	0 0	37	0 0*
Bride .....	4,291	2 38	473	3 9	2	5 8½	303	0 0	2	3 0
Lezayre .....	6,410	3 14	224	11 11½	19	0 0	141	8 0	56	0 36½
Maughold .....	5,535	1 27	214	8 2½	13	15 0½	141	8 0	72	0 0
Lonan .....	7,727	2 26	296	4 0½	1	5 0½	141	8 0	12	2 0
Onchan .....	4,728	3 15½	311	10 5½	2	19 2½	141	8 0	23	0 0
Braddan .....	6,533	0 7	419	12 7½	6	12 0	141	8 0		
Santon.....	3,610	3 21	175	3 4	1	13 10½	141	8 0	8	0 0
Malew .....	3,148	3 28½	183	15 7	21	4 10½	141	8 0	7	0 0
Arbory.....	2,890	2 33	143	16 5½	1	12 1½	141	8 0	6	0 0
Rushen.....	4,528	0 15	111	5 3½	3	10 4½	141	8 0	15	1 0
Total.....	89,458	2 9½	5489	5 10½	85	14 1½	3292	12 0		

\* The Chaplain of St. Jude's Andreas has 3 acres of glebe.

From the above table it will be perceived that the sum of £5575, for which the tithes were commuted, arises from the two sums of £5489 5s. 10½d., the value of the tithe, and £85 14s. 1¾d., arising from prescriptive payments. It is disposed of as under :—

	£	s.	d.
Sum paid to the incumbents of parishes .....	3292	12	0
The Lord Bishop .....	1515	0	0
The Crown .....	525	0	0
Chaplain of St. Jude's in Andreas .....	101	0	0
Trustees of Clergy Widows' Fund .....	141	8	0
Total .....	£5575	0	0

All the livings are in the gift of the Crown, excepting Braddan, Patrick, German and Jurby, which are in the gift of the Bishop. There are also glebe lands attached to the clerkship of several of the parish churches :—Maughold 29 acres, Andreas 4 acres, Santon  $\frac{3}{4}$  acre, Lezayre 12 acres, German 7 acres, Michael  $\frac{3}{4}$  acre, Ballaugh  $3\frac{1}{2}$  acres, Jurby 27 acres 2 roods, Bride 1 acre.

General Goldie is entitled to the tithes and customs payable from the Abbey lands of Braddan, which, exclusive of the Nunery estate of eight quarterlands, amount to the annual sum of £45.

Capt. Bacon is entitled to the one-third of the tithes payable from several estates in Kirk Santon, and which amount to the annual sum of £40.

George Quirk, Esq. was entitled to the one-third of the tithes of Arbory, but he sold them to the proprietors of the different properties from which the same were payable.

A Spittal, Esq. and M. Kelly are entitled to a portion of the tithes of Marown, amounting to the annual sum of £17.

Under authority of an Order in Council from her Majesty Queen Victoria, dated December 10th, 1842, of which the original is deposited in the Episcopal Registry, it is "ordered that the several payments now made to the several livings from the Royal bounty, shall upon the vacancy of each living cease, and the sum or sums thence arising be distributed to such poor Clergymen officiating under his license in the said island as



shall seem good to the said Bishop. Provided always, that the said Bishop shall not deprive the Schoolmasters of such portion of the said grant as they have heretofore received, and shall inform the Governor of the island from time to time of such alterations as he shall make in the several payments."

Under this order three different apportionments have already been made, whereby the salaries of the Chaplains of St. Jude's, St. Mark's, and St. John's have been increased.

There are at present 52 elementary schools in the island, in which 2750 children are under instruction, being upwards of an eighteenth of the entire population.

It is provided by the Common Law of the island that a school shall be built and maintained in substantial repair in every parish by assessment upon the inhabitants; that every child of a proper age shall attend the school; that certain children shall attend free of any charge, the rate of payment of the rest being fixed by law; and it is forbidden by law that any man should exercise the profession of a schoolmaster whose qualifications have not been ascertained by a competent authority, and who has not the license of the Bishop.

Thus the principle of State education in connection with the Church has been fully recognised in the Isle of Man since the day when Bishop Wilson procured the enactment of the 'Constitutions Ecclesiastical,' so highly eulogized by Lord Chancellor King.

Towards the maintenance of the Parish Schools a sum of about £200 is set apart from the Improprate Fund at the disposal of the Bishop and Archdeacon for Church purposes. There is a further sum of £16 13s. applied annually to this purpose under the designation of Royal Bounty, and £39 annually, arising from a bequest of Lady Elizabeth Hastings. These sums are distributed amongst the schools in portions averaging about £8 to each school. The remainder of the master's stipend is made up by quarterages paid by the children. See Report of the Parochial Schools of the Isle of Man, by the Rev. H. Moseley, F.R.S., one of her Majesty's Inspectors of Schools. 1847.

## F. Page 50.

*The Act of Surrender, made by Reginald to the See of Rome.*

“ Reginaldus Rex Insulæ Man, constituit se vasallum sedis Romanæ, et ex insulâ suâ facit Feudam oblatum, Londini 10 Cal. Octob<sup>r</sup>. 1219.

“ Sanctissimo Patri et Domino *Honorio* Dei gratiâ summo Pontifici, *Reginaldus* Rex Insularum commendationem cum osculo pedum.

“ Noverit sancta Paternitas vestra, quod nos, ut participes simus honorum quæ fiunt in Ecclesiâ Rom. juxta admonitionem et exhortationem dilecti patris Domini P. *Norvicen.* electi, Camerarij et Legati vestri, dedimus et obtulimus nomine Ecclesiæ Romanæ, et vestro, et Catholicorum vestrorum successorum, Insulam nostram de Man, quæ ad nos jure hæreditario pertinet, et de quâ nulli tenemur aliquid servitium favere, et deinceps nos, et hæredes nostri in perpetuum tenebimus in feudum dictam Insulam ab Ecclesiâ *Romand*, et faciemus ei per hoc homagium et fidelitatem, et in recognitionem Domini, nomine census, nos et hæredes nostri in perpetuum annuatim solvemus Ecclesiæ Rom. duodecim Marcas Sterlingorum in *Angliâ* apud Abbatiam de *Furnes Cisterciensis* Ordinis in festo Purificationis *B. Mariæ*. Et si non esset ibi aliquis ex parte vestrâ vel successorum vestrorum, deponentur dictæ duodecim Marchæ per nos et hæredes nostros penes Abbatem et Conventum, Ecclesiæ *Rom.* nomine. Hanc donationem, et oblationem dictus Dominus Legatus recipit ad voluntatem et bene placitum vestrum, et post receptionem factam ab eo sic ipse Dominus Legatus dictam Insulam dedit mihi, et hæredibus meis in feudum perpetuo possidendam et tenendam nomine Ecclesiæ *Rom.* Et me inde per annulum aureum investivit, &c.

“ Actum Lond. in domo militiæ Templi 10 Cal. Octob. Anno Dom. Millesimo ducentesimo decimo nono. Et ne super

his aliquando possit dubitari, has literas fieri fecimus et sigillo nostro muniri.

“Codex juris gentium Diplomaticus per Godefridum Gulielmum Liebnitzium, impressus Hanoveræ 1693, fol. pag. 5.”

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G. Page 61.

The following account of James, seventh Earl of Derby, is extracted, the former part of it from Dugdale's sketch of him, as given in Peck's '*Desiderata Curiosa*,' vol. ii. p. 436, the latter from Coleridge's '*Worthies of Yorkshire and Lancashire*.'

“James Stanley, Earl of Derby, was a person highly accomplished with learning, prudence, loyalty and true valour; whereof none are ignorant.

“To pass by the great state wherein he lived whilst this realm continued in peace, and his wonderful hospitality, he was one of the first who repaired to King Charles I. at York, when by reason of the dangerous tumults at Westminster in the beginning of the year 1642, his Majesty became necessitated to retire thither. Whence being ordered back into Lancashire, to prepare for the King's reception, upon a resolution taken for setting up the royal standard at Warrington, he forthwith mustered the whole county on three heaths near Berry, Ormskirk and Preston, where he had an appearance of at least 20,000 men at each place: intending the like course in Cheshire and North Wales (by virtue of his commission as lord-lieutenant in those parts). But in this interim the place resolved on for erecting the standard being changed (to the great disappointment of the King's faithful subjects in those parts and the no less encouragement of his enemies), it was set up at Nottingham. When the countries not coming in so freely as was expected, the King by special letters desired his Lordship to raise what men he could and hasten to him. Whose answer was, that he would do his best; but that the

case was then much altered ; a great part of the country resolving to stand neuters ; and that many others had already joined with the rebels and seized upon Manchester.

“ All this notwithstanding, amongst his own tenants dependants and private friends, he raised three regiments of foot and three troops of horse. Which he clothed and armed at his own charge, and then posted to the King at Shrewsbury for orders how to dispose of them. Whereupon his Majesty commanding him to return and forthwith to make trial of one smart assault upon Manchester ; and then, whether he mastered that town or not, to march up to the general camp ; he repaired to those his forces ; drew up before that town ; and upon his summons thereof it refusing any treaty, directed an assault at four of the clock next morning, with hopes to carry it. But that very night receiving commands from the King to haste to him in two days’ space, he brought up his regiments and troops to his Majesty. Which being disposed of under the command of other officers, he was desired to return back and take what care he could of the country. Hereupon the party then sitting in Parliament in Westminster made offer to him of the largest terms imaginable, in case he would come to them or quit the King’s service. But to this he answered, ‘ When I turn traitor, I may hearken to these propositions ; but till then let me have no more of these papers, at the peril of him who brings them.’ This being the second time they had in that kind attempted him.

“ By this time the enemy having garrisoned the towns of Lancaster and Preston, and in a manner brought the whole country under their power, his Lordship set himself to fortify his own house at Lathom. And, though his arms and magazine were gone (how, you will hereafter hear), made shift, with the assistance of his friends, to cut off three companies of the enemy on Houghton Common ; as also to take Lancaster and Preston by storm. In the former leading on his men himself, with a half pike in his hand (after one repulse) to the second assault, which did the business. Manchester having, in all

probability, followed, had not his auxiliaries and his own forces been called away in that very nick of time, when he was ready for the attempt.

“ Soon after this, upon information that the enemy had a design upon the Isle of Man, he was ordered thither for the defence of that place. And went accordingly, having first made some necessary provisions of men, moneys and ammunition for the protection and defence of his incomparable lady at Lathom; to whose charge he committed his children, house, and other his English concerns.

“ During the Earl of Derby’s absence in the Isle of Man, his Countess, the Lady Charlotte, being left in this house, the enemy looked upon it as their own; expecting little from a woman, being a stranger, or that the place being so unprovided (as they supposed) any considerable resistance could be made; so that a commission was presently obtained for the reducing it\*.

“ Upon intelligence given to the Earl of these his lady’s distresses, he hasted out of the Isle of Man to beg relief to his Majesty. Whereupon orders were given that Prince Rupert should take Lancashire in his way to York, unto which place he was then designed. But no sooner did Rigby hear that his Highness had entered Lancashire at Stopford Bridge, than he raised his siege on the 27th of May 1644, and marched to Bolton, a strong garrison of the enemy. Where, with the addition of other forces to 2000 of his own, he made up a body of 2500 foot and 500 horse. Upon notice whereof to the Prince, he marched directly thither, and gave orders for an assault. Which, though gallantly attempted, succeeded not at the first; he therein losing 200 men, the enemy killing all they took upon the walls, in cold blood, in his sight. Whereupon a second assault being resolved, the Earl of Derby desired to have the command of two companies of his old foot, and the honour of the forlorn. Which at his importunity being

\* An account of the siege of Lathom House will be found in Bohn’s Standard Library. The Countess kept possession for one whole year, till relieved by Prince Rupert.

granted, and all things ready, the town was carried in the space of half an hour, on every side ; he himself being the first man to set foot in it, upon the 28th of May. Whereupon Rigby made his escape, leaving 2000 of his men behind.

“ Upon the taking of this rebellious town, Prince Rupert sent all the colours to the Countess at Lathom ; and so marched to Liverpool for reducing that. Thence he went to Lathom, where he staid four or five days ; but before his departure gave direction for repairing and fortifying the house, and at the request of the Countess disposed the governorship thereof to Captain Edward Rawsthorne, whom he made colonel of a foot regiment, and two troops of horse, for its defence. By which captain it was stoutly defended for full two years more in a second siege, but at last by his Majesty’s order delivered up ; having cost the enemy no less than 6000 men, and the garrison about 400, it being one of the last places in this realm which held out for the King. Such was the fate of Lathom House.”

The latter days of this noble Earl are thus detailed by Mr. Coleridge. See also Ward’s ‘ Ancient Records, &c. of the Isle of Mann,’ p. 162.

“ After the raising of the siege of Lathom House, an. 1644, the Earl and his Countess returned together to the Isle of Man. For Derby and his consort the following years were years, not of peace, but of comparative inaction. Cooped up in their diminutive kingdom, they were honoured as patriarchal princes ; they bad defiance to the fleets, the threats and the persuasions of Parliament. Even when their children, whom they had sent into England on the faith of a pass from Fairfax, were detained in captivity by the ruling powers, though repeated offers were made to restore them, with the whole of the English estates, if the Earl would give up his island ; he constantly answered that much as he valued his ancestral lands, and dearly as he loved his offspring, he would never redeem either by disloyalty. Nor did they change their resolution even when the King, for whom they held their rocks and little fields, was no

more, and his son a wandering exile. Angry at solicitations which implied an insult to his honour, Derby returned the following reply to that fierce republican Ireton, who had urged the old proposal with renewed earnestness :—

“ ‘ I received your letter with indignation, and with scorn I return you this answer : that I cannot but wonder whence you should gather any hopes from me, that I should (like you) prove treacherous to my Sovereign, since you cannot be insensible of my former actings in his late Majesty’s service ; from which principle of loyalty I am no way departed. I scorn your proffers ; I disdain your favours ; I abhor your treasons ; and am so far from delivering this island to your advantage, that I will keep it to the utmost of my power to your destruction. Take this final answer, and forbear any further solicitations ; for if you trouble me with any more messages upon this occasion, I will burn the paper and hang the bearer.

“ ‘ This is the immutable resolution, and shall be the undoubted practice of him, who accounts it the chiefest glory to be

“ ‘ His Majesty’s most loyal and obedient subject,

“ ‘ DERBY.’

“ ‘ Castle Town, 12th July 1649.’

“ He remained in the Isle till 1651, when the younger Charles entered England at the head of a Presbyterian army, governed by Presbyterian preachers, with which it was impossible for the English Royalists cordially to cooperate. But Derby’s loyalty had no reservations ; his oath of allegiance contained no proviso for the case of a King bringing the Solemn League and Covenant along with him. At the request of Charles, (who sent him the order of the Garter,) he left the island, and landed in Lancashire, to join in as unpromising an enterprise as ever threw away good lives. Having sent forth trusty emissaries in all directions to announce his arrival, and call his cavaliering friends and neighbours from their retreats, two or three days after he parted with the King, he

fixed his quarters at Wigan, to wait the coming up of the musters. But next morning he was unexpectedly attacked by a large body of militia and regulars under Lilburn, whom Cromwell had detached to hang upon the King's rear and prevent the junction of stragglers.

"Derby's 'band of brothers' were set upon in an irregular street, which enabled them to make a prodigious stand against over-running numbers. 'Three thousand veterans, practised in war's game,' were barely sufficient to cut to pieces, and trample under foot, 200 loyal English gentlemen. In this skirmish the Earl received seven shots in his breastplate, thirteen cuts in his beaver, and five or six wounds in his arms and shoulders, and had two horses killed under him. Yet his time was not yet come. He escaped almost singly, and found his way through Shropshire and Staffordshire, to join the King at Worcester.

"Of the result of the 3rd of September, and the subsequent wanderings and escapes of Charles, who in this land of oaks is ignorant? It was Derby that, with cold and bleeding wounds, led the King in secrecy to St. Martin's gate, and directed him to the concealments of White-ladies and Boscobel, where he himself had found shelter not many days before. He then made for his own country, though sick of heart and wounded sore; but scarcely had he gained the borders of Cheshire, when he was overtaken by a party under Major Edge, to whom he surrendered under a promise of quarter. He was led prisoner to Chester. The Parliament sent down a commission of nineteen persons, selected from the military, who formed a sort of court-martial, styled 'a High Court of Justice,' in order to 'try the Earl of Derby for his treason and rebellion.' Of course the Earl was found guilty, and condemned to die; but by an unnecessary aggravation of cruelty, the execution was appointed to take place in his own town of Bolton-le-Moors, where a few years ago he appeared a conqueror. He was beheaded on Wednesday the 15th of October 1651. Two days before he wrote a letter to his Countess, which we will give entire:—



“ ‘My dear Heart,—I have heretofore sent you comfortable lines, but, alas! I have now no word of comfort, saving to our last and best refuge, which is Almighty God, to whose will we must submit; and when we consider how He hath disposed of these nations, and the government thereof, we have no more to do but to lay our hands upon our mouths, judging ourselves, and acknowledging our sins, joined with others, to have been the cause of these miseries, and to call upon Him with tears for mercy.

“ ‘The Governor of this place, Colonel Duckenfield, is General of the forces, which are now going against the Isle of Mann; and however you might do for the present, in time it would be a grievous and troublesome thing to resist, especially those that at this hour command the three nations, wherefore my advice notwithstanding my great affection to that place, it is that you would make conditions for yourself, and children and servants, and people there, and such as came over with me, to the end you might get to some place of rest, where you may not be concerned in war, and taking thought for your poor children, you may in some sort provide for them: then prepare yourself to come to your friends above, in that blessed place where bliss is, and no mingling of opinions.’ \* \* \*

“ Mr. Bagerley, one of the Earl’s gentlemen, who was allowed to attend him to the last, drew up a narrative of his dying hours, the manuscript whereof still remains in the family:—

“ Upon Monday, October 13th, 1651, my Lord procured me liberty to wait upon him, having been close prisoner ten days. He told me the night before, Mr. Slater, Colonel Duckenfield’s Chaplain, had been with him from the Governor, to persuade his Lordship that they were confident his life was in no danger; but his Lordship told me he heard him patiently, but did not believe him; for, says he, ‘I was resolved not to be deceived with the vain hopes of this fading world.’ After we had walked a quarter of an hour, he discoursed his own commands to me, in order to my journey to the Isle of Mann,

as to his consent to my Lady to deliver it on those articles his Lordship had signed.

“After we were out of the town, the people weeping, my Lord, with an humble behaviour and noble courage, about half a mile off, took leave of them; then of my Lady Catherine and Amelia upon his knees by the road-side, (alighting for that end from his horse,) and there prayed for them, and saluted them, and so parted. This was the saddest hour I ever saw, so much tenderness and affection on both sides.

“That night, Tuesday, the 14th October, we came to Leigh; but in the way thither, his Lordship, as we rode along, called me to him, and bid me, when I should come into the Isle of Mann, to commend him to the Archdeacon there, and tell him he well remembered the several discourses that had passed between them there, concerning death, and the manner of it; that he had often said the thoughts of death could not trouble him in fight, or with a sword in hand; but he feared it would something startle him tamely to submit to a blow on the scaffold. ‘But,’ said his Lordship, ‘tell the Archdeacon from me, that I do now find in myself an absolute change as to that opinion; for I bless God for it, who hath put this comfort and courage into my soul, that I can as willingly now lay down my head upon the block as ever I did upon my pillow.’

“Then we went to prayer, and my Lord commanded Mr. Greenhaugh to read the Decalogue, and at the end of every commandment made his confession, and then received absolution and the sacrament; after which, and prayers ended, he called for pen and ink, and wrote his last speech as follows:—

“‘Now I must die, and am ready to die, I thank my God with a good conscience, without any malice, on any ground whatever, though others would not find mercy upon me upon just and fair grounds: so my Saviour prayed for his enemies, and so do I for mine.

“‘As for my faith and religion, thus much have I at this time to say: I profess my faith to be in Jesus Christ, who died for me, from whom I look for my salvation, that is

through His only merit and sufferings. And I die a dutiful son of the Church of England, as it was established in my late Master's time and reign, and is yet professed in the Isle of Mann, which is no little comfort to me.

" 'I thank my God for the quiet of my conscience at this time, and the assurance of those joys that are prepared for those that fear Him. Good people, pray for me; I do for you; the God of Heaven bless you all, and send you peace; that God that is truth itself, give you grace, peace and truth. Amen.'

" Just before he suffered he calmly requested that the block might be removed so as to face the Church, saying, 'I will look towards thy sanctuary while here as I hope to live in thy heavenly sanctuary for ever hereafter.'

" So he laid himself down with his neck to the block, and his arms stretched out, saying,—

" 'Blessed be God's glorious name for ever and ever. Amen. Let the whole earth be filled with his glory. Amen.'

" And then, lifting up his hands, the executioner did his work, and no manner of noise was then heard but sighs and sobs."

After her husband's death the Countess of Derby still held out her domain of Mann, ruling it with a broken fortune, broken heart, but unbroken spirit, till those Christians, to whom the Earl at his leave-taking had committed the care of his wife and children, and of the Island forces, betrayed it to the Government. Then was the Countess for a time a captive, and afterwards a wanderer, subsisting on such kindness as the poor can bestow on the poorer still. At the Restoration the estates reverted to her eldest son, and she spent the short remnant of her days at Knowsley Park. She died in 1662.



## H. Page 76.

The foundation-stone of King William's College was laid by Lieutenant-Governor Smelt on St. George's day, April 23, 1830. The building, which stands at the head of Castletown Bay, is of mixed early English and Elizabethan character. It extends S.E. by E. and N.W. by W. 210 feet. The transept at right angles to this direction in the centre of the building, including the Tower and Chapel, is 135 feet. The Tower, placed between the Chapel and the rest of the building, rises to a height of 115 feet from the ground. The original design, furnished by Messrs. Hansom and Welsh, included an octagonal turret on the summit of the Tower intended as an observatory, but it was abandoned in the erection. The contract for the building by the late Mr. Fitzsimons was £6000. The Chapel (not yet consecrated) was built by Bishop Ward out of moneys collected in England for building churches on the island. The building is now divided into seven fire-proof compartments, separated by strong party-walls rising above the roof, and communicating through cast-iron doors, the passages being flagged with stone. It contains, in addition to the Chapel and Tower, the residences of the Principal and Vice-Principal, the Library, and four Class-rooms.

The fund accumulated by the Trustees from the rents of the Ballagilley and Hango Hill estate, amounted in 1830 to £2071 10s. Through the exertions of Bishop Ward, a subscription-list, nobly headed by himself with £100, produced nearly £2692 more, and the College estate was mortgaged by Act of Tynwald for another £2000. A sum of £50 per annum is set apart from the proceeds of the trust for the gradual paying off this incumbrance. The building cost £6572 18s. The College lands, originally held under lease at £20 per annum, were let in 1769 for a term of thirty-one years at the annual rental of £100. Again in 1800 they were re-let at £341 15s. per annum; in 1826 they obtained a further advance to a rental of £489 1s. per annum; and lastly in 1842 they were let at

about £520 per annum. The Principal receives from this estate the same salary as was formerly given to the Academic Master. The salaries of the other masters (except a portion of that of the Vice-Principal, and £15 paid to the English master from a bequest of the late Mrs. Quilliam) are paid out of the tuition-fees of the students.

The remainder of the proceeds of the trust is expended in exhibitions to Manx students to the Universities of Great Britain, in the payment of interest upon the borrowed capital of £2000, in the reserved fund for the liquidation of this debt, and on improvements of the College estate.

The Manx Exhibitioners to Oxford, Cambridge, or Trinity College, Dublin (of whom there are at this present three), are bound by the terms of Bishop Barrow's will to return and serve in the Manx Church upon the call of the Bishop, or to refund the sum advanced to them for their education out of the trust.

The Trustees of the College are His Excellency the Lieut.-Governor, the Lord Bishop, the Clerk of the Rolls, the Attorney-General, the senior Deemster and the Archdeacon.

The educational arrangements of the College are after the original plan of Llampeter in South Wales, combining a grammar-school, with a higher department for students for holy orders. The ordinary course embraces the Greek and Latin classics, Hebrew, with Greek, Latin and English composition, history and geography, the mathematics, with mensuration, fortification and navigation. The modern languages and drawing are optional. The course of religious instruction is according to the doctrine and discipline of the Church of England. The tuition-fees vary, according to age, from £4 to £10 per annum. The board 30 guineas. The masters are voluntarily educating gratuitously 22 boys, of whom the greater portion are sons of the native Manx clergy.

The first Principal was the Rev. E. Wilson, M.A., of St. John's College, Cambridge, who was succeeded by the Rev. A. Phillips, D.D., of Jesus College, Cambridge. He was suc-

ceeded by the Rev. R. Dixon, M.A., of St. Catherine Hall, Cambridge, in 1841, who had previously been Vice-Principal from the opening of the College. The original library of the College was removed from the grammar-school, Castletown, in the principalship of the Rev. E. Wilson. It belonged to the Academic School. It contained several volumes given by Bishop Wilson, many of them containing his autograph and motto, "Tuta et Parvula." It was increased by many benefactors; amongst them Lord de Grey gave Bishop Ward £20 to be laid out in books; Captain Willis of Castletown and R. Quayle, Esq. made valuable presents, and the British and Foreign Bible Society gave a selection of their versions. But the most liberal donor was Bishop Short, who presented a valuable collection of Hebrew books, works of Greek and Latin criticism, the Delphin Classics in 141 volumes, Stephens' Greek Thesaurus, 8 vols. fol.; Facciolati's Latin Lexicon, 4 vols. fol.; Critici Sacri, 9 vols. fol.; works of Johnson, Robertson, Burnet, Clarendon, Strype, Grindal, Whitgift and Parker, &c. Very many of these books formed a part of the library of the late Dr. Ireland, Dean of Westminster, his Lordship's uncle.

Between two and three o'clock of the morning of January 14th, 1844, a fire broke out in the dining-hall of the Principal, in the western wing of the College; its origin has never been discovered. Owing to the circumstance of the entire roof of the building being connected throughout, and two wainscoted and floored corridors running from end to end, the flames spread with fearful rapidity, and in a very short time consumed (with the exception of the greater part of the Vice-Principal's residence) the entire building, tower and chapel. There was a great destruction of property. The library was all but wholly consumed. Most providentially no accident of life or limb occurred, though the inmates of the College numbered nearly 100. The Principal was fully insured, but the College only to the amount of £2000, a very inadequate sum. Bishop Short drew up a circular, asking for pecuniary aid, and head-

ing the subscription-list with £300. The call was handsomely responded to, and £1871 10s. was raised. The cost of rebuilding amounted to £3791 16s. 4d.

The rebuilding and refitting the College after the fire was undertaken voluntarily and gratuitously by J. Timperley, Esq., Civil Engineer, to whose assiduous attentions, energy and perseverance, the rapid restoration of the building is to be ascribed. Sufficient progress was made to enable the members of the College and their friends to meet for the annual distribution of prizes in the large class-room on the 4th of June of the same year. The College Library has already in part been restored by donations of books from various sources.

The University of Oxford, through the interest of Bishop Short, made a most munificent donation of a choice selection of 344 volumes, printed at the Clarendon press, handsomely bound. Bishop Short has also himself largely contributed to the new library, and has obtained presents from his friends. The Rev. W. P. Ward, son of Bishop Ward, formerly of this diocese, contributed several valuable works. The Parker Society replaced the works published by them which had been burnt, and the British and Foreign Bible Society more than replaced their original gift of selected versions of the Holy Scriptures. The University of Cambridge presented several volumes, printed at the Pitt press. Mrs. Shirley, widow of Bishop Shirley, presented, at Bishop Shirley's request, 63 volumes; being a complete series of the Latin Fathers.

The most liberal of all the recent benefactors to the College was the late Mrs. Quilliam, relict of Capt. Quilliam, R.N., of Ballakeign, near Castletown. She gave two separate sums of £100 to the building and rebuilding the College, the communion-plate, value nearly £100, and a pair of silver candlesticks for the Holy Table. She left by will the sum of £300, the interest to be applied to assist towards the salary of a master to teach navigation and other useful sciences. She also by the same will left to the Masters of King William's College the



reversion of the estate of Orrisdale, in the parish of Malew, valued at about £130 per annum; which estate has fallen in by the death of her niece, Mrs. Gunton. The validity of the bequest having been disputed by the heir-at-law,—by an action at Common Law, December 7th, 1847, a verdict has at this time been given in favour of the College claim.

The Act of Mortmain not applying to the Isle of Man, bequests of landed property may at any time be made to corporate bodies as well as to private individuals.

A Museum for the reception of objects of natural history has been commenced, and has received some valuable donations. Lectures on Natural Philosophy are periodically delivered at the College. A payment of 2s. 6d. per quarter is made by the students towards the purchase of philosophical apparatus, and the augmentation of the Library and Museum. Prizes of books are open for competition on various subjects.

His Excellency Lieutenant-Governor Ready gave £5 per annum for the encouragement of English poetry and mathematics, which has been continued by His Excellency the Hon. Charles Hope.

Bishop Ward gave 5 guineas (continued by his successors) for a Latin and an English Theological Essay.

James Clarke, Esq., Attorney-General of the Isle of Man, and Recorder of Liverpool, gave £5 per annum for the encouragement of English composition; continued by Charles Ogden, Esq.

The Venerable Archdeacon Philpot gave prizes of books for the encouragement of Greek and Latin verse. Archdeacons Hall and Moore have continued a donation of two guineas and a half to the same object.

Francis Lace, Esq., of Ingthorpe Grange, Skipton, Yorkshire, gives £10 per annum for the encouragement of Hebrew, a knowledge of the Greek Testament, and English history.

The following documents, taken from the Chancery records of the Isle of Man, will be found interesting in connection with

the building of King William's College.—Chancery Records, 1673:—

“Whereas there is a full accord between the Bishop of St. Asaph and the Isle of Man concerning the profits belonging to the Bishopric of the Island from the time of its vacancy, and all disputes and differences between them about any concerns in the island being concluded; And whereas it is agreed between them, with my consent and approbation, that the whole profits for the year 1671 shall be placed in the hands of William Banks of Winstanley in the county of Lancaster, Esq., till we can meet with convenient purchase for the erection of a public school for academic learning: These are to require you to collect the profits aforesaid, and all charges necessary for the collection being deducted, to return the money by the first opportunity, that it may be fixed and employed according to the agreement between us.

“Given under my hand at Knowsley the 8th June 1672.

“DERBY.”

“To the Deputy-Governor of my  
Isle of Man.

“In presence of { ISAAC. ASAPH.  
HENRIC. SODORENSIS.”

In the Chancery Book, 1675, there is a deed of sale from Charles Moore to Bishop Bridgeman, by which it appears that in that year the Bishop purchased the Abbey of Rushen from Charles Moore, with the intention of erecting the Academic School there; but having been unable to accomplish this through want of funds, the property was subsequently restored to the said Charles Moore.

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# I. Page 113.

The analysis by Dr. Kemp, for the purpose of determining the per-centage of lime in the marls of the north and south of

the island, gave for a sample taken from Kirk Bride parish, near Point Cranstal, only 5·145 per cent. of lime, whilst a sample from Hango Hill, near King William's College, yielded about 24·5 per cent. A sample taken at Ronaldsway, near Derby Haven, a little to the westward of the basset edge of the old red sandstone, gave 6·75 per cent., and the same was very nearly the proportion of a mass from Strandhall, where the limestone beds a little to the eastward are greatly altered and crystalline in consequence of the intrusion and overlying of masses of trap.

These facts indicate the extremely local character of the contents of great part of the boulder clay ; and show also that the great use of the marl in the north of the island is to give consistency to the sandy soil, rather than to supply it with a proper quantity of lime, of which 20 per cent. should be added to make it a good manure.

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#### K. Page 176.

##### *Mining Operations on the Isle of Man.*

Evidences of mining operations carried on at a very early date have been noticed at Brada Head, in the south of the Isle of Man.

A level appears to have been driven in just above high-water mark in the north-western face of the headland, reaching about 200 yards. By means of a shaft sunk from above this level about 12 yards higher up and inclining inwards, and also by means of other shafts sunk below the level, a considerable quantity of ore (sulphuret of lead) was obtained. The level was wrought through the vein, which was very irregular, in some parts 40 feet high by 6 feet broad, in others little or no ore appeared. Its quality seems to have been but indifferent. Some wedges of a description in use before the introduction of gunpowder into mining, called *feather-wedges*, have been found in the mine, and the general appearance of the work bespeaks remote antiquity ; history and even tradition are

silent by whom and at what period these operations were commenced. It is stated in Chaloner's 'Caledonia' (vol. iii. p. 372) that John Comyn, Earl of Buchan, obtained from Edward I. a license to dig for lead in the Calf of Man to cover eight towers of his Castle of Cruggleton in Galloway. In the course of the fifteenth, sixteenth, and seventeenth centuries, the noble family of Stanley appear to have sought for copper in the same neighbourhood: traces of their labours remain. The ore discovered, though not abundant, was rich in quality, producing six pennyweights of copper per ounce of ore. The vitriolic character of some springs of water in that neighbourhood is noted in Sacheverell's 'Account' 150 years ago, and in the Statute-Book of the Isle of Man various notices of mining operations occur under the dates A.D. 1422, 1613, 1618, 1630. See 'General View of the Agriculture of the Isle of Man, &c.' by Thomas Quayle, Esq., 1812.

The neighbourhood of Laxey seems to have attracted attention about the beginning of the present century. Mr. Wood was the first to draw up any particular account of the mine. Writing in 1811 he says that a level had been begun about thirty years previously, but not regularly worked, being much incommoded with water. The vein wrought consisted of common brown blende, lead glance, and occasionally green carbonate of copper in a matrix chiefly of quartz; small portions of phosphate and of carbonate of lead were interspersed. He also states that his information was, that the galena was so rich in silver as to produce on assay 180 oz. to the ton. The blende was for some time neglected, but latterly more attention has been paid to its working and dressing, and it has obtained a good price in the market. At a later period a second level was driven into the hill about a quarter of a mile further down the stream and about 5 fathoms below the level of the former excavation, for the purpose of drainage. The workings, extending 200 yards into the heart of the mountain, were not at first very productive. The number of hands employed in 1811 was only three at the time of Mr. Wood's visit. A new

company having been formed for working the minerals in that neighbourhood on a more extensive scale, has been amply rewarded. When I visited the mine last summer, I obtained the following notes from inspection and information on the spot:—

The mine (situated at a distance of about one and a half mile from the sea up the Laxey valley) consists of the grand day adit driven in the north-eastern face of the hill just above the level of the stream, which flows along the bottom of the valley. This adit runs N.  $15^{\circ}$  E. magnetic 400 fathoms into the heart of the mountain. At 200 fathoms met with productive ore. At this point it is met by the engine shaft at 23 fathoms from the surface. A second shaft meets this adit at about 180 fathoms from its entrance. From this adit downwards various shafts are sunk upon the vein, and connected by galleries at 20, 30, 35, 45, 50, 60, 70, 80, 100, 110, 120, 130 fathoms below it, the last being about the total depth of the then workings below the level of the day adit. At that depth the width of the vein was 16 feet, the vein hading to the east magnetic one foot in a fathom out of the perpendicular; it is pursued on the strike to the north.

The number of men employed was 300, raising 60 tons of lead per month at £20 10s. per ton, 200 tons of black jack mixed with the lead worth £2 10s. per ton, and 5 tons of copper averaging £5 per ton.

Both water and steam power is used; the radius of the water-wheel at the lower shaft is 17 yards.

The Foxdale mining ground has however hitherto proved the most productive on the island, the proximity of the granite of South Barrule having very beneficially affected the mineral riches of that neighbourhood. By analogy we may well conclude that the workings of the Laxey mine are likely to become more valuable as they are carried in the direction of the Dhoon granite. The Foxdale district extended across the northern side of South Barrule, from Glen Rushen nearly eastward, or rather to N. of E., which is the general strike of the productive veins on the island.

The present company was formed in 1823. They purchased from Michael Knott, Esq., who was lessee under the late Duke of Athol.

The chief workings at that time were upon what is generally termed the Foxdale vein to the northward of the great granitic boss, crossed by elvans striking out from the nucleus of the granite. Very little except horse and water power had been employed, though there were at that time two small steam-engines also at work, and the depth reached was never more than 40 fathoms. The great workings are now carried on at the eastern and western extremities of the district, at Cornelly or Jones vein in the neighbourhood of Kenna, and at the Beckwith vein in Glen Rushen. The Cronck Vane (White-hill) mine, more in the centre of the district, on the brow of the hill betwixt Sleauwhallin and South Barrule, a few years ago was worked with very great results. The miners appear to have fallen in with one of those great sops or masses of ore which I have noticed in the body of this work as generally characteristic of limestone districts, but which appears as a peculiar feature of this schistose country also.

At the time of my visit, in company with Professor Ansted, three years ago, the depth attained into the body of ore was 88 fathoms, the width of the vein or mass at its centre being 24 feet, thinning off to the E. and W. to about 4 feet. The length of this body of productive ore was 14 fathoms. The vein had generally a southerly dip, the walls being very clean, and presenting in several places extensive appearances of slickenside. There is very little gossan upon these veins, and not in general any indication of their presence till the workman comes directly upon the body of lead. The prediction of Professor Ansted at that time, respecting the duration of the working at the Cronck Vane mine, seems to have been fully verified, as I found on my last visit to the place the works abandoned.

The number of men and boys employed at the mines of this company in different parts of the district is generally about

350, and the average raising of ore for the last ten years has been about 2400 tons per annum. The product gives about 70 per cent. for lead, and 9 oz. silver per ton.

The steam power now employed is very extensive and on the newest principle.

The Ellersley mine on the Bishop's Barony is wrought by a different company. It is situated to the eastward of the last-mentioned district, about five miles from Douglas. It appears to have been commenced on a very thin even vein, consisting of a narrow thread of ore in veinstone, the outcrop-being visible at the surface in a small burn running from the ridge betwixt Foxdale and Mount Murray. Considering the extremely rapid and extensive variations in thickness and value observable in the continuation of the vein westwards, it was not unreasonable to hope that the result might be favourable in this spot, notwithstanding that the distance from the granite or other apparent change of ground was unsatisfactory.

It appears that, in accordance with the more usual conditions, this latter indication was but too accurate, and the vein which has been pursued from its outcrop upwards of 300 fathoms, at a depth of from 6 to 10 fathoms presents such a striking uniformity as greatly to discourage further working. At one or two points cross courses have been met with, but they do not affect the value of the vein.

Copper does not appear to have been wrought to any great extent on the island. I discovered a small vein about two years ago in the south of the Calf Islet, as also one at Port Erin. There is a Copper Mining Company in Maughold parish, but hitherto they have not succeeded in raising ore for the market. The iron mines however in that parish are of a very promising character. For a long period back small parcels of that ore had been wrought in several places. In the year 1836 a company was formed, and procured a lease from the Crown for twenty-one years. They opened a vein known by the name of the 'Glebe Vein,' not far to the westward of Maughold Church, which proved productive and was

partially wrought for a few years. Latterly William Dixon, Esq., of Glasgow having become sole lessee, the mines during the last three years have been more closely followed up, and have produced an average shipment of about 500 tons per month, fetching in the market 16s. per ton when pig iron is £3 per ton. By a return from F. C. Skrimshire, Esq., Agent for the Woods and Forests, I find that in the year 1846 a royalty of £232 was paid from this mine. About seventy men are employed in connection with these works.

The quarries of stone and marble are not wrought extensively on the island. They have paid latterly a royalty averaging not more than £90 per annum. By the insular laws every person standing in need of limestone or building stone may enter on his neighbour's land and dig and carry away what is requisite for his own use, paying the occupier a reasonable satisfaction, which appears to be interpreted merely surface damage.

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L. Page 187.

*The Herring Fishery.*

The herring fishery has always formed such an important branch of the Isle of Man commerce, that a brief notice of it seems necessary in the present work. In the year 1827 a Committee of the House of Keys inquired into and reported on the subject of the herring fishery to the following effect:—

“It would appear that, contrary to the generally received opinion, a shoal or shoals of herrings enter St. George's Channel from the south in the month of May, when the fishery commences near Arklow on the coast of Ireland, and that the progress of the fish to the northward is slow, Arklow, Ardglass, and the Isle of Man being the successive fishing-grounds frequented by the Cornish boats; that the body of fish seldom reaches the Isle of Man before the middle of June or later; that two coral-banks situated to the E. and W. of the island, and chiefly the former, would seem to be the ultimate annual



destination of this shoal or shoals, these spots being uniformly frequented by them for the purpose of therein depositing their spawn; that after the completion of this process, in the months of October and November, these shoals again return southward with greater expedition than they had advanced, and furnish a second or winter fishing at Arklow in November. The separate facts connecting this course of migration seem to be distinctly shown in the evidence, and an Arklow fisherman states the very conclusive circumstance, that in the summer fishery the herrings always mesh with their heads to the north, and in the winter with their heads to the south, or in other words, that in summer they are caught to the south of the net, and in the winter to the north of it."

*An Account of the Number of Boats belonging to the Isle of Man, whether decked or undecked, that have been employed in the year ended 5th January 1846 in the Herring, Cod, Ling, and In-shore Fisheries.*

Number of boats, whether decked or undecked . . . . .	606
Number of fishermen and boys by whom the said boats were manned . . . . .	3,813
Number of coopers employed . . . . .	13
Number of persons employed in packing . . . . .	186
Number of labourers employed . . . . .	54
Total number of persons employed —————	4,066
Number of fish-curers . . . . .	86
Tonnage of boats employed in the herring, cod, and ling fisheries . . . . .	5,145
Square yards of netting used in the herring fisheries	3,608,064
Yards of long lines and buoy ropes used in the fisheries . . . . .	386,400
	£
Value of boats employed in the fisheries . . . . .	63,945
Value of nets employed in the fisheries . . . . .	18,792
Value of lines employed in the fisheries . . . . .	690
Total value of boats, nets, and lines, employed in the fisheries . . . . .	<u>83,427</u>

Of the above 606 boats there are 278 yawls that follow the in-shore fishing, the tonnage and value of which have not been ascertained.

283 boats follow the cod, herring and ling fisheries; 45 smacks run fresh and bulk fish to Liverpool and other parts in the Channel; 606 belong to the Isle of Man, and are manned by 3813 men; 278 yawls follow the in-shore fisheries.

There are about

50 Irish vessels running fish to Liverpool,	
6 men each. . . . .	300 men
45 Welsh and English, 4 men each . . . .	180
200 Irish fishing-boats, 8 men each . . .	1600
200 English fishing-boats, 8 men each . .	1600
495 vessels employing . . . . .	3680 men

employed on the coast of the island during the fishing season and consequently frequenting its harbours, in addition to the 606 vessels above-mentioned. Total, 1101 vessels manned by 7493 men.

The harbours on the west coast of the island will not accommodate half the above, neither Peel nor Port St. Mary can contain a quarter of the above vessels, and it is certain that the deficiency of harbour-accommodation prevents the extension of the fisheries; the risk of life and property being great even where there is harbour-room for the vessels, but much greater where there is a deficiency, and that to so great an extent as to prevent parties embarking capital.

30,352 barrels of herrings were cured in the above year, but in the preceding year about 60,000 barrels were cured, and each barrel is allowed to contain 800 herrings; average price paid to the fishermen is about 4s. per hundred, or 32s. per barrel, fresh.

The usual quantity allowed for the consumption of the island when well-supplied is about 10,000 barrels. When there is a medium fishing, the value of the herring, cod and ling fisheries, together with the in-shore fishery, fluctuates between £60,000 and £80,000 per annum.

The returns exhibited in the following page are independent of the number of vessels passing in the night-time, and those visiting the island direct from England.

*Number of Vessels observed to pass Point of Ayre Lighthouse during the year 1847.*

Date 1847.	Ships.			Barques.			Brigs and Schooners.				Sloops.				Steam vessels.				Total.			
	No. of Vessels.	Course.		No. of Vessels.	Course.		No. of Vessels.	Course.		No. of Vessels.	Course.		N o.	Course.		N o.	Course.					
		N. S.	E. W.		N.	S.		E.	W.		N. S.	E. W.		N.	S. E. W.							
Jan.							244	51	63	74	56	155	25	24	56	50	42	21	17	1	3	441
Feb.							194	48	56	30	20	65	14	18	12	21	42	18	22	...	2	261
March							326	97	75	88	66	166	42	50	35	39	47	17	25	2	3	539
April							329	84	105	64	76	231	44	56	58	73	55	30	22	3	...	615
May							367	102	116	65	84	161	29	35	39	48	62	28	23	3	8	590
June							517	174	143	89	111	318	60	71	100	87	92	39	46	4	3	929
July	1	1				1	503	106	150	132	115	247	50	55	63	79	85	42	35	4	4	836
Aug.	1	1				1	454	124	117	100	113	295	63	79	80	73	90	40	43	3	4	842
Sept.	4	3	1				416	128	81	55	152	124	32	30	19	43	51	17	24	8	2	
Oct.							287	49	102	89	47	97	21	23	30	23	36	13	18	5	...	
Nov.	2	1	1			1	223	60	85	39	39	118	33	34	25	26	46	24	21	1	...	391
Dec.	4	2	1	1			186	50	46	42	48	127	22	17	44	37	31	12	15	2	2	344
	12						4003					2097					679					6806

*Return of Shipping observed to pass the Calf of Man Lighthouses during the year ending the 26th Jan. 1848.*

Description of Vessels.	Courses.				Total.
	N.	S.	E.	W.	
Ships .....	91	121	.....	.....	212
Barques .....	136	169	.....	3	309
Brigs and Schooners .....	820	923	534	612	2889
Sloops .....	234	247	100	107	688
Steamers .....	110	82	22	17	231
Total .....	1391	1542	657	739	4329

## M. Page 199.

An inquiry into the language anciently spoken by the Celtic race shows that, as respects the British Isles at least, it divides itself into two great dialects, which for convenience we may term Cambrian and Gaelic, taking as types the Cymraeg as spoken in Wales and the Gaelic as spoken in the Highlands and islands of Scotland. A closer examination gives a still further division, and as varieties or subdialects of the former (the Welsh) we notice the old Cornish, which died out rather more than a century ago, and the Armorican or language of Bretagne, spoken by the lower classes of the present day\*; as varieties of the latter (the Gaelic) we mark the Erse or ancient Irish and the Manx. Thus the Manx, the Gaelic and the Erse are sufficiently alike to enable a person speaking any one to understand the other two. This is not the case between the Manx and the Welsh, though they have some words in common or only slightly differing. The Manx is spoken generally in the mountain districts of the Isle of Man, and in the north-western parishes. There are however few persons (perhaps none of the young) who know no English. Its orthography does not appear to have been fixed on any sure principle, nor was it printed till just at the beginning of the eighteenth century, when Bishop Wilson caused to be printed a small tract in Manx and English entitled 'The Principles and Duties of Christianity.'

Except one or two popular ballads, the earliest of which seems to have been composed in the sixteenth century†, there

\* The same dialect was spoken anciently in Cumberland, where a branch of the Cymry maintained their ground till the close of the eighth century. The Cymry clearly derive their name as being Cimbri, Cimmerii or Gomerii, the offspring of Gomer. So German again is simply Gomerian.

† It is entitled "Mannanan Beg mac y Lheirr; ny, slane coontey jeh Ellan Vannin." It commences with an account of Mannanan the necromancer, and the conversion of the Isle by St. Patrick, and terminates with the landing of Thomas, second Earl of Derby, in 1507. It was probably composed about 1510. See Train's History, vol. i. p. 50.

is no native literature to reward the study of it. No dictionary has been published of English into Manx, but there is a very useful and copious dictionary of Manx into English by Mr. Archibald Cregeen, printed in Douglas in 1835, which contains also some introductory remarks which will be found serviceable in the examination. Dr. Kelly compiled a grammar\* of the language, but the copies are very scarce. He also compiled a dictionary, of which a corrected copy went to press, but perished by fire together with the printing-office.

The following notice† of some of the peculiarities of the language and the mutations of letters I have chiefly compiled from Mr. Cregeen's work and Kelly's Grammar.

The Manx possesses a plural article *ny* (the), as *ny deiney* (the men), *ny claghyn* (the stones); *y* and *yn* are the singular.

The adjective is placed after the substantive, as *booa ghoo* (a cow black), a black cow; *magher mooar* (a field big), i. e. a big field.

They say *dhaa ghooiney*, two man; *feed dooiney*, twenty man; *dhaa-eed dooiney*, forty man; not two men‡, twenty men, &c.; yet they say *tree deiney*, three men; *kiare deiney*, four men, &c.

\* "A Practical Grammar of the Antient Gaelic, or Language of the Isle of Mann, usually called Manks." By the Rev. John Kelly, M.A., Vicar of Ardleigh, &c. Quarto, London, 1804.

† This must only be regarded as a very imperfect notice. There are a great many exceptions to the rules which I have stated.

‡ We may well consider this as a dual.

The numerals are:—

- |  |                              |
|--|------------------------------|
| 1. Unnane ( <i>unity</i> ), or un before substantives.   | 9. Nuy.                      |
| 2. Jeas ( <i>both</i> ), or dhaa before a substantive.   | 10. Jeih.                    |
| 3. Troor ( <i>trine</i> ), obsolete; tree in common use. | 11. Unnane-jeig.             |
| 4. Kiare.  | 12. Dhaa-yeig, &c. &c.       |
| 5. Queig.  | 20. Feed ( <i>a score</i> ). |
| 6. Shey.   | 21. Unnane-as-feed.          |
| 7. Shiaght.  | 30. Jeih-as-feed.            |
| 8. Hoght.  | 31. Unnane-jeig-as-feed.     |
|  | 40. Dhaa-eed or dhaeed.      |
|  | 60. Tree-feed.               |

The substantives are all masculine or feminine, none neuter.

The adjective has also a plural, as *dooiney mooar*, a big man ; *deiney mooarey*, big men.

The alphabet consists of the following letters :—*a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, sh, sl, t, u, v, w, y*. Of these *c, d, g, l, m, p* and *t* admitting an aspirate become *ch, dh, gh, lh, mh, ph* and *th* ; *sh* and *sl* are considered as double consonants, since they have a change peculiar to themselves.

*Table of Mutable Consonants with their changes.*

Radical.	Aspirate.	Guttural.	
b	v	m	bea, <i>life</i> ; e vea, <i>his life</i> ; nyn mea, <i>our life</i> .
c	ch	g	carrey, <i>a friend</i> ; e charrey, <i>his friend</i> ; nyn garrey, <i>our friend</i> .
ch	h	j	chiarn, <i>a lord</i> ; e hiarn, <i>his lord</i> ; nyn jiarn, <i>our lord</i> .
k	ch	g	keyrey, <i>a sheep</i> ; e cheyrey, <i>his sheep</i> ; nyn geyrey, <i>our sheep</i> .
f	qui- escent.	v	foays, <i>advantage</i> ; e oays, <i>his advantage</i> ; nyn voays, <i>our advantage</i> .
p	ph	b	pooar, <i>power</i> ; e phooar, <i>his power</i> ; nyn booar, <i>our power</i> .
ph	qui- escent.	v	phreeney, <i>a pin</i> ; ereeney, <i>his pin</i> ; nyn vreeney, <i>our pin</i> *.
q	wh	g	quing, <i>a yoke</i> ; e whing, <i>his yoke</i> ; nyn guing, <i>our yoke</i> .
s	h	t	sooill, <i>an eye</i> ; e hooill, <i>his eye</i> ; nyn tooill, <i>our eye</i> .
sh	h	ch	shenn ghooiney, <i>an old man</i> ; e henn ghooiney, <i>his old man</i> ; yn chenn ghooiney, <i>the old man</i> .
sl	lh	cl	slat, <i>a rod</i> ; e lhat, <i>his rod</i> ; yn clat, <i>the rod</i> .
t	h	dh	towse, <i>a measure</i> ; e howse, <i>his measure</i> ; nyn dhowse, <i>our measure</i> .

I have termed the second and third columns aspirates and gutturals from their prevailing characters. The *f* and *ph* when aspirated pass at once into a mere breathing or are quiescent, as the old Greek digamma. The following consonants admit but one change :—

Radical.	Aspirate.	
d	gh	dooiney, <i>a man</i> ; e ghooiney, <i>his man</i> .
g	gh	geay, <i>wind</i> ; e gheay, <i>his wind</i> .
j	y	Jee, <i>God</i> ; e Yee, <i>his God</i> .
m	v	moyrn, <i>pride</i> ; e voyrn, <i>his pride</i> .

\* This instance is given in Kelly's Grammar, but it is of rare occurrence.

It is to be observed that a labial is never changed to a dental, nor a dental to a labial.

The changes of these initial letters are made either for the sake of euphony, or they are indicative of gender, government, declension, &c. Thus words of the feminine gender change the initial of their following adjective: as *dooiney bane*, a fair man; *ben vane*, a fair woman.

When two substantives come together belonging to different things, the latter if masculine, and the article *y* or *yn* precede it, changes its initial into the aspirate\*; if feminine, the article *ny* instead of *yn* is used in the genitive without any change of the initial letter.

If an adjective† be placed before its substantive, the initial of the substantive is changed into its aspirate: as *drogh-ghooiney*, a bad man; *shenn ven*, an old woman.

The plural of nouns is generally formed by the terminations *yn*, *ghyn* or *aghyn* added to the singular, and sometimes by the change of vowels: as *mac*, a son; *mec*, sons: *fer*, a man; *fir*, men: *kecill*, a church; *kialteenyn*, churches.

The pronouns personal are *mee* or *ym*‡, I; *oo*, thou; *eh*, he; *ee*, she; *shin*, *main* or *mayd*, we; *shiu*, ye; *ad*, they. These are placed after the verbs with which they are joined.

The root of the verb seems to be the imperative mood. The different tenses present and past are formed by means of auxiliary verbs, and the participles, the future and aorist (answering to the English perfect by inflection) by certain changes in the initial letter and by postfixes.

The auxiliary verbs are *dy ve*, to be; *dy vbd*, to be able.

In interrogative sentences the Manx use *vel* instead of *ta*

\* Words beginning with *d*, *j*, *t*, of the mutable consonants are excepted.

† The adjectives so placed are *drogh*, bad; *shenn*, old; also *giare*, short; and *thag*, loose (English *slack*?).

‡ I have put down *ym* as one form of the nominative, though it is not in use by itself. It appears however in the genitive *aym*, i. e. *ec-ym* (of me), and the compounds *foym* (*fo-ym*), under me; *aynym* (*ayns-ym*), in me; *rhym* (*rish-ym*), to me, &c.; and in the first person of the future tense of verbs as a pronominal affix, as in *caillee ym* (I shall lose).

(am, &c.): as *ta me* (I am), *vel me* (am I?); *ta shin* (we are), *vel shin* (are we?).

The following is the conjugation of the verb *dy ve*, *to be*.

INDICATIVE MOOD.—PRESENT TENSE.

*Sing.* *Ta mee, I am*; *ta oo or t'ou, thou art*; *t'eh or ta eh, he is*; *t'ee, she is*.

*Plur.* *Ta shin, we are*; *ta shiu, ye are*; *t'ad, they are*.

PRETERIMPERFECT.

*Sing.* *Va mee, I was*; *v'ou, thou wast*; *v'eh, he was*; *v'ee, she was*.

*Plur.* *Va shin, we were*; *va shiu, ye were*; *v'ad, they were*.

PRETERPERFECT.

*Sing.* *Ta mee er ve, I have been*; *t'ou er ve, thou hast been*; *t'eh er ve, he has been*; *t'ee er ve, she has been*.

*Plur.* *Ta shin er ve, we have been*; *ta shiu er ve, ye have been*; *t'ad er ve, they have been*.

PRETERPLUPERFECT.

*Sing.* *Va me er ve, I had been*; *v'ou er ve, thou hadst been*; *v'eh er ve, he had been*.

*Plur.* *Va shin er ve, we had been*; *va shiu er ve, ye had been*; *v'ad er ve, they had been*.

FUTURE.

*Sing.* *Bee'm, I shall be*; *bee oo, thou shalt be*; *bee eh, he shall be*; *bee ee, she shall be*.

*Plur.* *Bee mayd, we shall be*; *bee shiu, ye shall be*; *bee ad, they shall be*.

IMPERATIVE MOOD.

*Bee, be thou.*

*Bee-jee, be ye.*

SUBJUNCTIVE MOOD.—PRESENT TENSE.

*Sing.* (My) *vee'm, (if) I be*; (My) *vees oo, (if) thou be, &c.*

*Plur.* (My) *vees mayd, (if) we be*; (my) *vees shiu, (if) ye be, &c.*



## PRETERIMPERFECT.

*Sing.* Veign, *I might be*; veagh oo, *thou mightst be*; veagh eh, *he might be*.

*Plur.* Veagh shin, *we might be*; veagh shiu, *ye might be*; veagh ad, *they might be*.

## PRETERPERFECT AND PRETERPLUPERFECT.

Veign er ve, *I might have been*, &c.

## INFINITIVE MOOD.

PRESENT. Dy ve, *to be*.

## PARTICIPLES.

PRESENT. *Wanting.* PRETERIT. Er ve, *having been*.

FUTURE. Er-chee ve, *about to be*.

Row, *was*, is also an auxiliary of the past tense, but used also in supplications for the future: as, Shee dy row mârîn! *May peace be with us!*

The following is an example of a regular verb:—

Dy choayl, *to lose*; from the root caill, *lose thou*.

## INDICATIVE MOOD.—PRESENT TENSE.

*Sing.* Ta mee coayl, *I am losing*, &c.

*Plur.* Ta shin coayl, *we are losing*, &c.

## IMPERFECT.

*Sing.* Va mee coayl, *I was losing*, &c.

*Plur.* Va shin coayl, *we were losing*, &c.

## AORIST.

*Sing.* Chaill me, *I lost*, &c.

*Plur.* Chaill shin, *we lost*, &c.

## PRETERPERFECT.

*Sing.* Ta mee er choayll, *I have lost*, &c.

## PRETERPLUPERFECT.

*Sing.* Va mee er choayll, *I had lost*, &c.

## FUTURE.

*Sing.* Caillee-ym, *I shall lose* ; caillee oo, *thou shalt lose*, &c.

*Plur.* Caillee mayd ershin, *we shall lose* ; caillee shiu, *ye shall lose*, &c.

## IMPERATIVE MOOD.

Caill, *lose thou*.

Caill-jee, *lose ye*.

The Subjunctive Mood may be formed through the auxiliary foddym, *I may be able* : thus,—

## PRESENT TENSE.

*Sing.* Foddym coayll, *I may lose* ; foddee oo coayll, *thou mayst lose*, &c.

Or, more regularly, after the adverbs dy, *that* ; my, *if* : thus,—

*Sing.* (My) gaillyn, (*if*) *I may lose* ; (my) gaill oo, (*if*) *thou mayst lose*.

## PRETERIMPERFECT.

*Sing.* Yinnyn coayl, *I might lose* ; yinnagh oo coayl, *thou mightst lose*.

## AORIST.

*Sing.* Chaillin, *I would lose* ; chaillagh oo, *thou wouldst lose*, &c.

## PRETERPERFECT AND PRETERPLUPERFECT.

*Sing.* Veign-er-choayl, *I had or might have lost*, &c.

## INFINITIVE MOOD.

PRESENT. Dy choayl, *to lose*.

PARTICIPLE PRESENT. Coayl, *losing*.—PRETERIT. Er choayl, *having lost*.—FUTURE. Er chee coayl, *about losing*.—SUPINE. Caillit, *lost*.

The passive voice is formed by the auxiliary verb dy ve and the supine : as, Ta me caillit, *I am lost*, &c.

The following copy of the Lord's Prayer in Manx, with an

interlined English version, will give an idea of the structure of the language :—

Ayr ain t' ayns niau, Casherick dy row dt' Ennym. Dy jig  
*Father our who art in heaven, Holy (may) be thy name. Come*  
 dty reeriaght. Dt' aigney dy row jeant er y thaloo myr te  
*thy kingdom. Thy will be done on the earth as it is*  
 ayns niau. Cur dooin nyn arran jiu as gagh laa. As  
*in heaven. Give to us our bread today and every day. And*  
 leih dooin nyn loghtyn myr ta shin leih dauesyn ta  
*forgive to us our trespasses as are we forgive to those are*  
 jannoo loghtyn nyn 'oi. As ny leeid shin ayns  
*committing trespasses us against. And not lead us into*  
 miolagh; agh livrey shin veih olk. Son lhiats y reeriaght,  
*temptation; but deliver us from evil. For thine the kingdom*  
 as y phooar as y ghloyr, son dy bragh as dy bragh. Amen.  
*and the power and the glory, for the ever and the ever. Amen.*

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N. Page 204.

The life of Bishop Thomas Wilson is given at full length in the editions of his works by Crutwell. There is also an able biography of him by the late Rev. Hugh Stowell, Rector of Ballaugh, and another by the Rev. Richard Hone. From the former the following is a brief abstract :—

Thomas Wilson was born at Burton in Cheshire, on the 20th December 1663, of "honest parents fearing God," as he himself says. His father, who died in 1702, was descended from a family which from time immemorial had lived in that neighbourhood; his mother was sister to Dr. Sherlock, Dean of Chichester. His early education he received from Mr. Harper, a schoolmaster of Chester, with whom he continued till his admission into Trinity College, Dublin, in 1680. It was his intention originally to study medicine, but having contracted an intimacy with Archdeacon Hewetson, that pious dignitary perceiving his serious and earnest disposition, and his peculiar fitness for the ministerial office, prevailed on him to turn his attention to divinity studies, which he did, and on St. Peter's day, 1686, he was ordained deacon by Dr. Morton,

Bishop of Kildare, on the day of the consecration of the cathedral church of Kildare, when he, in conjunction with Archdeacon Hewetson, presented at the offertory a small silver paten for the service of the holy table. It is to Archdeacon Hewetson's friendship and early counsel we must in great part attribute that high tone of Church feeling which pervaded all the after-acts of his life as well as the writings which he has left behind him. In a memorandum-book kept by Bishop Wilson, we find at the commencement of it, written in the Archdeacon's own hand, a short notice of the ordination of his dear young friend, "with some advices thereupon." Amongst them the following memoranda will sufficiently point out the sentiments of their author upon Church order and discipline:—

"To say morning and evening prayer, either publicly or privately, every day, is the Church's express command in one of the rubricks before the calendar."

"In church to behave always very reverently, nor ever to turn the back upon the altar in service-time, nor on the minister when it can be avoided; to stand at the Lessons and Epistle, as well as at the Gospel, and especially when a Psalm is sung; to bow reverently at the name of Jesus whenever it is mentioned in any of the Church's offices; to turn towards the east when the Gloria Patri and the Creeds are rehearsing; and to make obeisance at coming into and going out of the church, and at going up to and coming down from the altar; are all antient, commendable and devout usages, and which thousands of good people of our Church practise at this day."

Archdeacon Hewetson continued to correspond with and to advise Mr. Wilson till 1704. On the 10th of December 1686 he was licensed to the curacy of New-Church, in the parish of Winwick, Lancashire, of which his uncle, Dr. Sherlock, was rector, on a stipend of £30 per annum; and on 20th October 1689 he was ordained priest. Three years afterwards he was appointed domestic chaplain to William ninth Earl of Derby, and tutor to his son James Lord Strange, afterwards tenth and

last Earl connected with the Isle of Man. Mr. Wilson took great pains with his noble pupil, whose principal faults were want of consideration and a precipitancy of temper. The following extraordinary instance of his management on a particular occasion is a proof at once of his upright character and faithfulness. One day as Lord Strange was going to set his name to a paper which he had not read, Mr. Wilson dropped some burning sealing-wax on his finger; the sudden pain made him very angry, but his tutor soon pacified him by observing that he did it in order to impress a lasting remembrance on his mind never to sign or seal any paper he had not first read and attentively examined.

In the year 1697 the Earl of Derby offered him the Bishopric of the Isle of Man, which had been vacant since the death of Dr. Baptiste Levinz, who died in 1693. This kind offer Mr. Wilson modestly declined, alleging that he was unequal to as well as unworthy of so great a charge. Dr. Sharp, Archbishop of York, afterwards complaining to King William that a bishop was wanting in his province to fill the see of Man, and the King urging the matter with the Earl of Derby, and threatening to fill up the vacancy himself, the Earl insisted on his chaplain accepting the preferment, and thus was he, to use his own expression, "forced into the Bishopric." On the 15th January 1697-8, Mr. Wilson, being first created D.C.L. by the Archbishop of Canterbury, was confirmed Bishop of Man at Bow Church by Dr. Oxenden, Dean of the Arches, and the next day consecrated at the Savoy by Dr. Sharp, Archbishop of York, assisted by the Bishops of Chester and Norwich. On April 5th following he landed at Derby Haven in the Isle of Man, and on the 11th was enthroned in the cathedral of St. German, within Peel Castle. The value of the Bishopric at that time did not exceed £300 in money, and when he arrived at it he found his palace in a most ruinous condition, nothing in fact remaining of it entire but an old chapel and tower. Yet with extraordinary economy he managed to lay aside from his income enough to build, first of all

a new church at Castletown, of which he laid the foundation in 1698, and next by degrees to put his palace and demesne into order, which last, according to a private memorandum, cost him upwards of £1400. In compensation for the condition in which he found his residence, and from a conviction of his worthiness, the Earl of Derby offered to him the living of Baddesworth to hold *in commendam*, but this he most conscientiously and nobly refused as utterly inconsistent with his duty. He married in 1698 Mary, daughter of Thomas Patten, Esq., by whom he had four children, two boys and two girls, only one of whom, the youngest (Thomas), grew up to man's estate.

The life of this good Bishop was a forcible illustration of that declaration of Scripture, "The path of the just is as a shining light, shining more and more unto the perfect day." The character given of Cyprian, Bishop of Carthage, very faithfully tallies with his :—"Faith and love and native simplicity appear to have been possessed by him when an early convert. He saw with pity the poor of the flock, and he knew no method so proper of employing the unrighteous mammon as in relieving their distress. His looks had the due mixture of gravity and cheerfulness, so that it was doubtful whether he was more worthy of love or reverence ; his dress also was correspondent to his looks. He had renounced the secular pomp to which his rank had entitled him ; yet he avoided affected penury." Bishop Wilson's liberality was such, that it was said by a gentleman who knew him well, that "he kept beggars from every body's door but his own." The following anecdote is to the same purport. He had ordered a cloak to be made by his tailor, giving him directions that it should be quite plain, with merely a button and a loop to fasten it. "But, my lord," said the tailor, "what would become of the poor button-makers and their families, if every one thought in that way ? They would be starved outright." "Do you say so, John ?" replied the good Bishop ; "why then button it all over, John."

He was most unceasing in the discharge of the duties of his

episcopate, and laborious in preaching throughout the diocese. He very frequently on Sunday rode out to distant parishes without giving the clergy any warning, doing duty and returning to Bishop's Court to dinner, and this even after he was eighty years of age, and on horseback. In his private diary we find under date 1712, "I supplied the vacant vicarage of Kirk Arbory for one year, and applied the income towards building a new vicarage-house; with this and what I begged, and two pounds ten shillings I gave myself, and the assistance of the parish, we have erected one of the best houses in the diocese."

On comparing his discourses with the generality of those preached in England during the period in which he lived, we cannot but be struck with their clear and full development of Evangelical truth. And yet there has been perhaps no prelate more deeply impressed with a sense of the dignity and importance of the episcopal office, or more jealous of any infringement upon the authority committed to him in the Church of God. In these points he was ready to suffer as for righteousness' sake, and he did suffer: his imprisonment in Castle Rushen is well known. It was entirely upon a matter of Church discipline, and on a subject greatly affecting the independence and purity of the Church of this Isle.

A doubt has sometimes been expressed as to whether the Canons of the English Church which received in the year 1603 the sanction of the clergy of the province of Canterbury, and were afterwards enjoined upon the whole Church by the King, are actually binding upon the clergy of the province of York, who did not assent to them. It is agreed that they are not binding upon the *laity* in either province, as they did not receive the sanction of Parliament. The Isle of Man is in the province of York, and the proctors for the clergy are summoned with the rest of the bishops and clergy of that province to Convocation. Now as even the English Acts of Parliament do not apply to the Isle of Man, nor is the Act of Uniformity (as such) binding here, there being no record of its adoption by the Insular legislature, and the approbation and signature of the Lord of the Isle, a still

stronger doubt may be raised upon the question of the validity of the English Canon law in this diocese. The Manx Church has always had its own peculiar and independent Canon law, and has been governed by it; and as respects the last of those enacted, drawn up by Bishop Wilson, there is no doubt of their being now binding equally upon clergy and laity. They are in fact Statute law, having been passed in the insular Convocation of the Clergy and in the House of Keys, confirmed by the Earl of Derby as Lord of the Isle, and published accordingly at the Tynwald Hill, June 6th, 1704.

Lord Chancellor King was so much pleased with these Constitutions, that he said, "If the ancient discipline of the Church were lost, it might be found in all its purity in the Isle of Man." Amongst these Canons, the fifth runs thus:—"For the more effectual discouragement of vice, if any person shall incur the censures of the Church, and having done penance, shall afterwards incur the same censures, he shall not be admitted to do penance again (as has been formerly accustomed) until the Church be fully satisfied of his sincere repentance; during which time he shall not presume to come within the church, but be obliged to stand in a decent manner at the church door every Sunday and holiday the whole time of morning and evening service, until by his penitent behaviour and other instances of sober living, he deserve and procure a certificate from the minister, churchwardens and some of the soberest men of the parish to the satisfaction of the Ordinary; which if he do not deserve and procure within three months, the Church shall proceed to excommunication; and that during these proceedings the Governor shall be applied to not to permit him to leave the island."

In Bishop Wilson's History of the Isle of Man, the following passage occurs:—"There is one very wholesome branch of Church discipline, the want of which in many other places is the occasion that infinite disorders go unpunished; viz. the injoining offenders purgation by their own oaths and the oaths of compurgators (if need be) of known reputation, and a severe



penalty is laid upon any that shall after this revive the scandal." Mrs. Horne, wife of Captain Horne, Governor of the Isle of Man in the year 1729, accused Mrs. Puller, a widow lady of fair character, of improper intimacy with Sir James Pool, and Archdeacon Horrobin, the Government Chaplain, upon this accusation debarred Mrs. Puller from the Holy Communion. She had recourse to the above mode pointed out by the constitution of the Church to prove her innocence, and she and Sir James Pool took the oath before the Bishop, with compurgators of the best character. No evidence being produced of their guilt, they were by the Bishop cleared of the charge, and Mrs. Horne sentenced to ask pardon of the parties whom she had so unjustly traduced. This she refused to do, and treated the Bishop and his authority, as well as the ecclesiastical constitution of the island, with contempt. She was consequently put under censure, and banished from the Lord's Supper till atonement should be made. In defiance of this censure the Archdeacon received her at the Communion, and was in consequence suspended by the Bishop. The Archdeacon, instead of appealing to his Metropolitan, the Archbishop of York, the only legal judge to whom the appeal could be made, threw himself on the civil power, and the Governor fined the Bishop £50, and his two Vicars-general, who had been officially concerned in the suspension, £20 each. This fine they all refused to pay as arbitrary and unjust; on which the Governor sent a party of soldiers, and they were on 29th June 1722 committed to the prison of Castle Rushen, where they were closely confined, and no persons admitted within the walls to see or converse with them. The Governor would not even permit the Bishop's housekeeper, Mrs. Heywood, the daughter of a former governor, to see him, or any of his servants to attend him in his confinement. From the dampness of the prison, the good Bishop contracted a disorder in his right-hand, which disabled him from the free use of his fingers, and he ever after wrote with his whole hand grasping the pen. He was confined in this prison for two months, but released at the end of

that time by petition to the King ; and on the 4th July 1724, the King in council reversed all the proceedings of the officers of the island, declaring them to be oppressive, arbitrary and unjust. The expenses of his trial were very great, and it is said that when his lawyers' bills were paid, little indeed remained to him or his son. The King offered him the Bishopric of Exeter to reimburse him, but he could not be prevailed on to quit his own diocese, nor would he prosecute the Governor to recover damages, though urged so to do. He had established the discipline of the Church, and he sincerely and charitably forgave his persecutors. The concern of the people was so great when they heard of his imprisonment, that they assembled in crowds, and it was with difficulty they were restrained from pulling down the Governor's house by the mild behaviour and persuasion of the Bishop, who was permitted to speak to them only through a grated window, or from the walls of the Castle, whence he blessed and exhorted hundreds of them daily, telling them that he meant to appeal to Cæsar.

The attachment between the Bishop and his flock was mutual, and so well known, that in the year 1735, when attending a levee of Queen Caroline, where there were several prelates in attendance, she turned round, and said, "See here, my lords, is a bishop who does not come for a translation." "No indeed, please your Majesty," replied the good Bishop, "I will not leave my wife in my old age because she is poor." He had before this been offered English bishoprics by Queen Anne and George I.

He seems to have had an instinctive dread of the evils likely to befall his diocese from the introduction of novel practices by innovating clergymen of the English Church.

In the year 1740 an application was made to the Bishop for leave to raise a subscription for a Sunday evening lecture at Douglas, to be preached by a clergyman lately come from England. His Lordship refused his assent, and his reasons for so doing are expressed in a letter to one of his clergy who made the application, commencing thus : "Your scheme, as you

call it, if suffered to take place, would be attended with more evil consequences than I have now time to mention, or, I hope, than what you have thought of; otherwise you would sure have consulted your Bishop before you would have suffered it so much as to have been spoken of; because, where people have taken a thing in their heads, right or wrong, they will be apt to lay the blame on those that oppose them, and reflect upon their judgement, discretion and piety; which I expect will be the consequence because I will not run headlong into your schemes, which would, in a great measure, set aside the express duties of catechising bound upon us by laws, rubricks and canons, which if performed as they should be, with seriousness and pains in explaining the several parts of the Catechism, would be of more use to the souls both of the learned and ignorant than the very best sermon out of the pulpit. This, I say, after a serious, plain and practical sermon in the morning by a minister of Jesus Christ who preaches by his pious life and example, as you say that gentleman doth, and I believe it, will answer all the ends of instruction without an afternoon sermon, which being a novelty in this diocese, may be attended with unforeseen mischiefs, which you yourself may have reason to repent of, and the rest of your brethren have reason to blame you for, if I should be so weak as to comply with your inconsiderate project," &c. &c.

The language of Bishop Wilson on this occasion, though severe, may be regarded as in a measure prophetic. English practices have so far been adopted, that public catechising, except on particular occasions, has ceased in this diocese. The present Bishop of St. Asaph, when Bishop of Man, laboured by exhortation and example to restore it, but met with little success or encouragement.

Bishop Wilson's earnestness on this subject was continued to the close of his life; indeed in one of his latest Charges to Convocation, delivered when he was 84 years of age, he expressly says, "In every one almost of our yearly meetings on this day, I have taken occasion of insisting, more or less, upon

the *duty* and the *necessity of catechising in the Church*, bound upon us as strictly as *laws* and *canons* and *conscience* can oblige any minister of God."

Bishop Wilson, though most sensitively alive to everything within the Church which seemed to infringe upon his authority and its ancient order and discipline, was most liberal in his sentiments towards those without. His biographer informs us that "he was so great a friend to toleration that the Papists who resided in the island loved and esteemed him, and not unfrequently attended his sermons and prayers. The Dissenters too attended even the Communion Service, as he had allowed them a liberty to sit or stand; which however they did not make use of, but behaved in the same manner with those of the Established Church. A few Quakers who resided on the island visited, loved, and respected him."

He did not interfere in temporal or political concerns, unless when called upon at the request of the inhabitants to serve them on particular occasions. Such an occasion was that when he gained for the people from the Earl of Derby their Magna Charta, the Act of Settlement. Again, in the year 1740, a year of great scarcity and famine and pestilence on the island, the Bishop distributed all his own corn and bought up what he could at a very high price, selling it out to the poor at a low; and when all the corn of the island was well nigh exhausted, he engaged his son to make interest with his Majesty, by which an order in council was obtained, taking off the embargo for a certain time upon corn imported into the Isle of Man.

He established a fund for the support of clergymen's widows at the suggestion of his son in 1730. The money collected by him and placed in the English funds amounted at that time to £12 per annum. Afterwards the thirds of the living of Kirk Michael were purchased and made over to trustees for the use of that charity for ever, and at the present time, from the commuted tithes of the island, £141 per annum is paid as its equivalent.

His early medical studies he turned to great account, and practised as a physician, bodily as well as spiritually, to the poor of the island. He kept a constant store of medicines, which he distributed as well as his advice gratis. His private papers note almost annually the gift of sums of money for the erection of churches, parsonages and school-houses, in his own diocese and elsewhere. He always kept an open, hospitable table covered with the produce of his own demesnes in a plentiful though not extravagant manner, and he maintained in his own house, under his own immediate care and instruction, candidates for holy orders.

The Bishop held an ordination in the year 1751, and another in 1752. In the year 1753 he consecrated a new chapel at Ramsey. His death followed two years after.

The following singular letter I discovered amongst some papers of Bishop Wilson in the possession of the Vicar of Malew, in the Isle of Man. It is simply the original draft, and the name of the person to whom it is written does not occur in it, yet from the contents there can be little doubt that it was addressed to the Honorable Archibald Campbell, one of the Nonjuring Bishops\*, who published a work in 1721 entitled 'The Doctrine of a Middle State, &c.,' also a 'Preservative against several of the Errors of the Roman Church.' Bishop Campbell's own copy of this work, with his MS. notes upon it, is in my possession.

"Honour'd Sir,

"I had not the Fav<sup>r</sup> of y<sup>rs</sup> upon the middle state and against Popery till a<sup>bt</sup> a month ago; by w<sup>t</sup> misfortune it came no sooner, I cannot yet learn; and hope you have rec<sup>d</sup> the Price of it long before this, I having writ twice to my friend to wh<sup>m</sup> you delivered it, to see you satisfied, w<sup>h</sup> I hope he has

\* The Honorable Archibald Campbell, after having been long in priest's orders, and after having long resided in London, was on August 25, 1711, consecrated a Bishop by the deprived Bishops Rose, Douglas, and Falconer. He was elected Bishop of Aberdeen in 1721, which charge he resigned in 1724. He died June 16, 1744.

done. The subject was not altogether new to me ; for besides what I could not but observe in my former readings, I had seen y<sup>r</sup> lesser peice soon after it was published.

“ Whatever objections may be made ag<sup>st</sup> Perfecting our condition in a future state, and the benefit the members of the Church in Paradise may reap from the Prayers of the Church on earth, the Doctrine of an Intermediate State is too well grounded upon the H. Scriptures to be opposed by any, except such as are much prejudiced or unacquainted with that subject.

“ But as well as a middle state is founded, and y<sup>t</sup> a Regular advance to Perfection seemed to be the just consequence of such a Doctrine, and altho’ the Primitive Church had their Commemorations of, and Prayers for such as died with the seal of Faith ; Yet since that Practice was not founded upon the H. Scriptures, and the consequence of restoring it at the Reformation might have been of as bad consequence as it w<sup>d</sup> have been to have continued the Agapæ in the Primitive Church which were therefore by Her laid aside ; one w<sup>d</sup> not too severely blame our Reformers, who thought it not convenient to continue the rep. of Prayers for the dead in the Publick service ; especially as they have not condemned it in their Articles, but have left it to the discretion of every pious member of our communion to believe and Act in this particular as he thinks fit.

“ And indeed if that Grand Delusion and dreadful doctrine of the Popish Purgatory, if this in all appearance has no better effect upon the generality of that communion than to make them trust too securely to a deathbed repentance, and as is much to be feared has been the ruin of many souls ; what might be the consequence if our People should come to be persuaded that without the terrors of a Purgatorial Fire they might thro’ the Prayers of the Church escape the just punishment of their negligence and disobedience, and attain such a Perfection as sh<sup>d</sup> render them acceptable to God at the day of Judg<sup>mt</sup> ? And considering the corruption of Human Nature, one cannot but fear that in time some such practice as is now the Reproach of the Church of Rome w<sup>d</sup> be introduced into

the Reformed Church, and too many w<sup>d</sup> think they should make a saving bargain to part with a good deal of money's to be secure of the Prayers of the Church, and not in the meantime to be oblig'd to part w<sup>th</sup> their lusts.

"I do not remember, y<sup>t</sup> in y<sup>r</sup> elaborate collection of S. S. you have taken notice of a Text, w<sup>h</sup> appears to Me expressly to determine the Doctrine of an intermediate State, and that the Souls of the Elect are in very different mansions betwixt Heaven and Earth according to the different Degrees of Holiness w<sup>h</sup> they have attained unto, and this until the Day of Judgement.—The Text, Mark 13, 27. If I have overlooked it in y<sup>r</sup> work, you 'll pardon me."

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O. Page 205.

Owing in some measure to its insular position, as well as the limited extent of the diocese, enabling the bishop really to oversee his flock, the Manx Church has been able to maintain more of ancient order and discipline than pertains to any other diocese in the British Isles. It is hardly likely that this can continue to be the case much longer, now that the communication with England is so easy and constant, and the influx of non-natives so large. Indeed for some years past many of the Church statutes really available for the suppression of vice and the maintenance of order have been practically a dead letter. I am informed that it is now about twenty years since the last act of public penance was performed in a case of incest. Bishop Wilson, in his 'History of the Isle of Man,' speaks of the practice as very general in his day, and most primitive and edifying; and he drew up a form for the reconciliation of penitents, which was constantly used. The practice of compurgation, which I have noted in his life, may now be considered as virtually abolished. As yet no marriages are legal except as performed by the clergy of the Church, though a bill has passed the insular legislature making an alteration in favour of Dissenters, similar to the change which took place ten years ago in England.

Although the English Act of Uniformity, as before observed, cannot (as such) be regarded as binding in the Isle of Man, yet the uniformity of Rubrical observance in country churches where Manx clergymen officiate is much more exact than in England. The offertory question for instance, which has produced so much ill feeling in the English Church, has not at all affected this diocese, because the offertory itself has never been dropped; and on Sundays when the Holy Communion is administered, the non-communicants withdraw as a matter of course after the prayer for "the Whole State of Christ's Church Militant here in earth," without the blessing. The absence of a poor-law on the island, rendering this ancient method of collecting the alms of the congregation more necessary, may perhaps more than anything else have tended to the preservation of this practice. Yet there is also an undercurrent, so to speak, of ancient Church usages clearly remaining, though only feebly developed and very imperfectly understood, which is not influenced by any such necessity. The practice for instance may be mentioned amongst the old people of bowing, not only at the name of Jesus, but also when the Gloria Patri is rehearsed; a practice which seems to have been adopted in ancient times as a distinctive mark of the orthodox, in acknowledgement of the mystery of the eternal Trinity.

Bishop Hildesley notes as a peculiar mark of Manx churchmanship that the common people reckon their time by the canonical church hours as a standard, saying so many hours before or after "traa sherveish," i. e. service-time. The Manx continue several singular and ancient usages in connection with the Church festivals. Amongst them those practised at the Oiel Varrey (or Eail Varrey), the vigil of Mary, or the night of the feast of Mary, i. e. Christmas Eve, attract most attention. The churches as in England being largely decked out with evergreens, the parishioners assemble for evening prayer, bearing in their hands to the church large candles prepared for the occasion, a species of rivalry existing as to who shall bring the largest. After the prayers and generally a sermon referring



to the Nativity, an intimation is given by the clergyman that any persons having carols to sing may commence. Choirs of singers then in different parts of the church relieve each other in turn, and the singing of anthems and carols is often kept up till a late hour.

The perambulations and acting of the White Boys at the same season is kept up still with as much vigour as in England, but on St. Stephen's day they have a practice which seems peculiar to themselves called "hunting the wren." Boys go out in parties into the fields, and when they have discovered a wren they pursue it with sticks and stones. Having secured their prize, they suspend it on a perch between two osier twigs decked out with ribbons and evergreens, and carry it about from house to house soliciting subscriptions and singing a song, in which allusion seems to be made to the stoning of St. Stephen, and the giving alms to the halt, the lame, and the blind\*. Wherever they receive money they give in return a feather of the bird, which after a successful day's tour is pretty well plucked. In the evening they carry out the wren for burial.

The convocation of the clergy has been occasionally alluded to, and more particularly in reference to the Canons and Constitutions Ecclesiastical of Bishop Wilson. In order to secure the discipline of the Church (as Bishop Wilson says), the bishop calls a convocation of his clergy at least once a year. The day appointed by law is Thursday in Whitsun week (if the bishop be in the Isle), when he has an opportunity of inquiring how the discipline of the Church has been observed, and by the advice of his clergy of making such constitutions as are necessary for its better government. It is one token of the independence of the Manx Church, as really a separate national church governed by its own laws, that the clergy can so meet, and that canons so passed have become law by the

\* The Manx have a proverb peculiar to themselves, to this purport: "Tra ta yn derry vought cooney lesh bought elley, ta Jee hene garaghtee:" i. e. *When one poor man relieves another, God himself rejoices at it*, or more literally, *laughs outright*.

consent of the laity in the house of representatives, and of the Lord of the Isle as supreme Governor in Church and State. So again the circumstance that Bishop Wilson drew up forms of public prayer which were used on various occasions, such for instance as that for the herring fishery, is another evidence of the same independence. We may mention to the same end also, the introduction into the litany and the present constant use of a prayer for the fisheries. The petition runs thus, "that it may please to bless and preserve to our use the kindly fruits of the earth, *and to restore and continue to us the blessings of the sea*, so as in due time we may enjoy them."

It certainly seems somewhat singular that with this liberty no such prayer has been introduced as is in use in Ireland and in the different colonies of Great Britain, in behalf of the Lieut.-Governor of the Isle for the time being, as well as another which seems desirable for the House of the Insular Legislature. Why the British Parliament in which the island has no representative and whose laws do not directly affect the Isle of Man should be exclusively prayed for, does not satisfactorily appear.

It is only very lately that the desecration of ancient churchyards and the treen oratories has taken place. There was a strong feeling in their behalf, even within the present century. A case of seeming divine retribution in one instance, where in an act of apparent necessity a species of sacrilege was committed, is often brought forward as having occurred in the parish of Jurby. A farmer in that parish during a violent storm of thunder and lightning drove his sheep for shelter into one of the old chapels, which I have noted as so frequent on the isle, which at that time (about seventy years ago) had the roof on it. It was afterwards observed that the farmer lost all the lambs of that flock in the ensuing spring, and that many of them were born monstrosities. The story was related to me by a clergyman, whose grandfather was the farmer in question. It at any rate exhibits the feeling then prevalent, and bears out the statement of Bishop Wilson, that the Manx

have generally hated sacrilege to such a degree that they do not think a man can wish a greater curse to a family than in these words :—‘ Clagh ny killagh ayns corneil dty hie woar,’ May a stone of the church be found in the corner of thy dwelling.

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P. Page 207.

The proper style and title of the bishop of this island, used in the documents by which he is inducted, is *Bishop of Man, of Sodor, of Sodor and Man, and of Sodor of Man*. The origin of this title, and particularly of the term Sodor, is somewhat curious and indicative of the various ecclesiastical changes in the extent of the diocese at different periods.

Originally, as now, the diocese was restricted to the Isle of Man. There is no reason to dispute the generally received tradition that it was constituted by St. Patrick, who in 447 left St. Germanus first bishop.

It appears doubtful whether St. Columba, who (according to the Saxon Chronicle) arrived in Iona, A.D. 560, as Abbot of that monastery, really exercised any episcopal jurisdiction beyond the limits of his monastery. The animosity entertained by the Saxon clergy against the school of Iona for adhering to the eastern doctrine and discipline instead of that of the Lateran is well-known, and therefore their testimony in this respect can hardly be relied on.

The Bishopric of Sodor and the Hebrides or Western Isles, was instituted in 838 by Pope Gregory the Fourth, the name Sodor, says Bishop Wilson, being taken from the cathedral church in Iona dedicated to our Saviour, in Greek Σωτήρ (Soter). At the same time it is to be observed that the thirty islands constituting this bishopric went by the name of the Sudereys, *i. e.* Southern Islands, another group to the north going by the name of Nordereys; and we often find in the Chronicles of Rushen, the terms Bishop of the Sudoer and Bishop of the Isles convertible. And this seems the most probable derivation of the term Sodor. But in the year 1098, Magnus of

Norway, having conquered not only the Western Isles, but Man, the bishoprics of Sodor and Man were united\*, and so continued till the close of the fourteenth century, when the English having conquered, and being in possession of the Isle of Man on the death of John Dunkan, A.D. 1380, the clergy of Iona and the Isles elected for their bishop a person named John, and the clergy of Man made an election of Robert Waldbby for their prelate†.

At the same time the Bishops of Man still retained their title of Bishops of Sodor, giving the name Sodor to the little island near Peel‡, in which the cathedral of St. German was built, and which had previously been called St. Patrick's Isle.

Thus we see then that the term Bishop of Man is the most ancient; and the title of Bishop of Sodor is equivalent to Bishop of Iona and the Southern Isles, Bishop of Sodor and Man the united diocese of the Sudereys (or Southern Isles) and Man; and Bishop of Sodor of Man, means Bishop of the cathedral-church in the little islet called Sodor adjoining or belonging to Man.

The Scotch Bishops after the separation never seem to have adopted the term Sodor, but only "Bishop of the Isles," whilst the Manx Bishop seems to have retained the title on the same principle that the kings of England retained the title of King of France long after they ceased to be possessed of any territory therein.

The arms of the Bishopric are Gules the Virgin Mary,

\* The Archbishop of Drontheim, called Nidorensis Episcopus, was Metropolitan, and the consecration took place at his hands.

† The Bishops of Man were then consecrated by the Archbishop of Canterbury, though they had been in more ancient times, as now, consecrated by the Archbishop of York; and the Bishops of Sodor (or of the Isles, as they were then called) were consecrated by the Archbishop of Glasgow.

‡ Thus we read in the grant made by Thomas Earl of Derby, in 1505, to Huan Hesketh, of "*Ecclesiam Cathedrallem Sancti Germani in Holm, Sodor vel Peel vocatam, Ecclesiamque Sancti Patricii ibidem.*"

standing on three ascents with her arms extended between two pillars, supporting on the dexter a church, all proper. In base the present arms of the island surmounted with a mitre\*.

It is stated in Keith's Catalogue of Scottish Bishops, that the ancient armorial bearing of the See of Sodor and Man was, Azure, St. Columba at sea in a cock-boat all proper in chief, over head a blazing star or.

If these were really the arms of the united Bishoprics of Sodor and Man, and not of Sodor alone, previous to the Union, I should feel disposed to regard the figure in the cock-boat or coracle as that of St. Maughold rather than St. Columba, as it bears so close a resemblance to the legend of his arrival upon the island; and he was the senior Saint and held by the Manx in special repute.

It is evident from the insertion of the three legs in the base of the shield, that the arms now in use were not assumed till after the Scottish Conquest; and it is interesting to trace their connection through the Abbey of Rushen with the Abbey of Furness, whose patron was St. Mary, and which abbey claimed a right, according to a grant from the Bishop of Rome†, to appoint to the Bishopric of Man. In this light they must be regarded as a tacit acknowledgement of that right, and of submission to the authority of the Pope.

Now the first Bishop of Sodor and Man, who seems more directly connected with the Papal See, was Richard, consecrated A.D. 1252 at Rome by the Archbishop of Drontheim: this was that Richard, who, with the presence and assistance of Magnus, the last king of the race of Goddard Crovân, consecrated the Abbey Church of St. Mary of Rushen in 1257. He died in 1274, *i.e.* four years after the Scottish Conquest, and was buried in the Abbey of Furness. The introduction

\* See Title-page.

† A bull of Pope Celestine to Furness Abbey runs thus:—"In eligendo Episcopum Insularum, libertatem, quam reges earum bonæ memoriæ Olavus et Godredus filius ejus monasterio vestro contulerant, sicut in authenticis eorum continetur, auctoritate vobis Apostolicâ confirmamus. Dat. Romæ 10 Cal. Julii, Pontificatus Nostri 4." See Ward's Ancient Records, page 31.

therefore of the arms of the See now in use, may with much probability be attributed to him.

The following account of the succession of Bishops of the Isle of Man, is given in great part in the words of Sacheverell, with some emendations and additions by Bishop Hildesley\*. Sacheverell seems in great part to have followed the unpublished manuscript in possession of the present Clerk of the Rolls, M. Quayle, Esq., unless both copied from some other common source; all have derived the *substance* of the Catalogue from the 'Chronicon Manniæ,' in which the monks of Rushen Abbey have handed down a list of the Bishops who filled the See of Man from the days of Goddard Crovân, A.D. 1056, till the episcopacy of John Dunkan, A.D. 1378, the last bishop before the island passed into the hands of the Stanley family.

There is no distinct evidence of Christianity having made any progress in the Isle of Man till the middle of the fifth century. Hector Boetius has made a statement which has been followed by Bishop Spotswood and Buchanan, that "Cratiliñth the Scottish king, A.D. 277, was very earnest in the overthrow of Druidism in the Isle of Man and elsewhere; and upon the occasion of Dioclesian's persecution, when many Christians fled to him for refuge, he gave them the Isle of Man for their residence, and erected there for them a stately temple, which he called Sodorense Fantm. And herein Amphibabus a Briton sat first Bishop." The story has however been rejected by most authors of good repute, and put on the same footing as that of Capgrave in his life of Joseph of Arimathea, respecting Mordraius the Manx king, said to have been converted to Christianity. Sacheverell justly observes that it is also almost impossible that the Manx nation should preserve no memory of so considerable a blessing as their first conversion to Christianity, but their tradition is directly against this story.

The mission of St. Patrick and his twenty coadjutors to Ireland, for the suppression of the Pelagian heresy, A.D. 434,

\* Bishop Wilson's account is also an abstract from Sacheverell.

is well known. He returned into Britain for the purpose of obtaining more help, and in company with thirty religious persons, whilst making a second voyage to Ireland, was driven by a storm to the Isle of Man, A.D. 444. Here finding the people much given to magic, under the influence of Mananan-beg-Mac-y-Lheir, he stayed three years, and was instrumental in their conversion to the pure Christian faith. To rule over this infant church\* he left

GERMANUS, A.D. 447, a holy and prudent man, one of his own disciples, and a canon of the Lateran, who so settled the matter of religion that the island never afterwards relapsed†. St. German, in honour of whom is dedicated the cathedral church of Man, dying in the lifetime of St. Patrick, that Apostle of the Manx Church consecrated successively

CONINDRIUS, of whom nothing is known but his name, and ROMULUS, during whose episcopacy

ST. MAUGHOLD, A.D. 498, arrived in the island, being cast ashore in his little leathern boat at the head which now bears his name. He was chosen Bishop by the universal consent of the Manx Church. This is said to have been five years after the death of St. Patrick, *i. e.* in 498. How long he sat Bishop is uncertain, though Dr. Heylin says he was Bishop in 578‡.

The successor of St. Maughold is said by tradition to have been

ST. LOMANUS, son of Tigrida, and nephew to St. Patrick; in honour of him the parish church of Kirk Lonan is dedicated; but his date is uncertain, as are those of his successors, whom Manx tradition puts down under the names of

\* "Ad regendum et erudiendum populum in fide Christianâ." Jocelinus in Vitâ Patricii, ap. Usher's Annals.

† *Ibid.*

‡ This seems very improbable, and I am inclined to read this as a misprint for 518, the date of his death as given in Keith's Catalogue of Scottish Bishops. This will nearly coincide with the statement of Sacheverell, that he probably sat Bishop for more than twenty-four years.

ST. CONAGHAN, and after him

ST. MAROWN, another patron of one of the insular churches.

It is known however that in A.D. 600

CONANUS, A.D. 600, tutor to the three sons of the fourth king of Scotland, was sitting bishop. He died January 26th, A.D. 648, and was succeeded by Rantantus, called also

CONTENTUS, A.D. 648, whose successors at unknown dates are stated to have been\*

BALDUS, of whom we have only the name, as also of

MALCHUS; nor have we any recorded succession till the eleventh century†. All that the monks of Rushen have been pleased to tell us of the intervening period is, that "there was doubtless a true succession," and that the Church flourished under the care of their bishops, successors to St. Patrick. It is not at all improbable, that during the period in which the authority of the Welsh princes‡ was acknowledged in the Isle of Man, there might be a close connection between the Manx Church and the relic of the ancient British Church in Wales, which did not till a very late period acknowledge the authority of Rome, and hence the silence of the Rushen Chroniclers§.

ST. BRANDON, A.D. 1025. In the eleventh century, St. Brandon, or Brandinus, or Brandanus, in honour of whom

\* Appendix to Memoirs of Bishop Hildesley, page 288.

† Torkinus or Torkins is inserted in the list of Bishops of Man, A.D. 880 by Bishop Hildesley and Mr. Train. The very circumstance however which is stated by them that he was Bishop of Sodor, contradicts his being Bishop of Man, as the Sees were not united till 200 years after his episcopate.

‡ See page 259, *supra*.

§ Whether the Archbishop of Armagh (as successor of St. Patrick) was acknowledged as Metropolitan is uncertain. It is not however improbable, for the See of York was not constituted under Paulinus till near the middle of the seventh century, and the first consecration we hear of by the Archbishop of York of a Bishop for the Isle of Man, was that of Wimund for the united dioceses of Sodor and Man, in the beginning of the twelfth century.



the parish church of Braddan is dedicated, is stated to have been Bishop of Man, and he has been placed \* as successor to Roolwer and William, who were Bishops in the same century ; yet it seems unlikely, had he succeeded them, that the 'Chronicon Manniæ,' which mentions these two, would have omitted him. The Chronicle begins the list thus :—  
 "These are the bishops which filled the episcopal see of Man since the time of Goddard Crownan, A.D., 1077, and a few years before." A short time before the reign of Goddard Crownan, or Crovân,

**ROOLWER**, A.D. 1050, was consecrated bishop. He is interred in the church of St. Maughold. Next

**WILLIAM**, A.D. 1065. After whom, according to Johnstone, in the 'Cello-Normanice,' there was one

**AUMOND M'OLAVE**, A.D. 1077, who was bishop at the time of the Norwegian Conquest. After him came

**WYMUND**, A.D. 1100, otherwise named Hamund, or Reymund, and by some Vermundus, of whom Matthew Paris† says, "Post conquestum Norwegorum A.D. 1098, binæ sedes Sodor et Man in unum coaluerunt et primus episcopus fuit Wymundus sive Vermundus." He was son of Jole, a Manxman. He was consecrated by Thomas Turstan, Archbishop of York, and seems to have been the first Bishop of Man who was a suffragan of that province. He had been a monk of the Abbey of Furness, but after his elevation to the Bishoprick of Sodor and Man, he married‡ a daughter of Somerled Thane of Argyle, and becoming obnoxious on account of his overbearing conduct, he was expelled the island, and his eyes were put out. Matthew Paris says that he died in 1151, and was succeeded by

**JOHN**, A.D. 1151, a monk of Sais, in Normandy, who was buried in St. German's. After him

\* Appendix to Memoirs of Bishop Hildesley, page 288.

† Hist. Angl. p. 85.

‡ Hailes' Annals of Scotland, vol. i. p. 87, quoted by Mr. Train.

- GAMALIEL**, A.D. 1154, an Englishman, was consecrated by Roger Archbishop of York in 1154. He died in 1181, and was buried at Peterborough. His successor was
- REGINALD**, A.D. 1181, a Norwegian; to him the thirds of all the livings in the island were granted by the clergy, that from thenceforward they might be freed from all episcopal exactions. It is probable that he was the first bishop that was consecrated by the Archbishop of Drontheim, in Norway. His successor was one
- CHRISTIAN**, A.D. 1190, a native of the Orkneys, who lies buried in the monastery of Bangor, in Ireland; to him succeeded
- MICHAEL**, A.D. 1195, a Manxman, a person of great merit and exemplary life. He died in a good old age, and was honourably buried "apud Fontanas." To him succeeded
- NICHOLAS DE MELSA**, A.D. 1203, Abbot of Furness. He lies buried in the Abbey of Bangor. After him
- REGINALD**, A.D. 1216, a person of royal extraction, sister's son to good King Olave, was consecrated bishop, and though he laboured under great infirmities of body, yet he governed his church with prudence and resolution; at last, with an exemplary resignation, he yielded up his soul into the hands of his Creator. He lies buried in the Abbey of Rushen, and was succeeded by
- JOHN**, the son of Harfare, A.D. 1226, who by the negligence of his servants was burnt, "apud Jerevas in Angliâ," *i. e.* Jervaux Abbey, Yorkshire. After him, one
- SIMON**, A.D. 1230, a person of great discretion, and learned in the Holy Scriptures, governed the Church with prudence and piety. He held a synod in the year 1239, in which thirteen canons\* were enacted, most of them relating to the probate of wills, the clergy's dues, and other infe-

\* See Dugdale's *Monasticon Anglicanum*, vol. i. p. 711, and Ward's *Ancient Records*, p. 127.

rior matters. He died at his palace of Kirk Michael in a good old age, and lies buried in the cathedral dedicated to St. German, in Peel Castle. After him

**LAWRENCE**, A.D. 1247, the Archdeacon, was elected Bishop, and after great disputes, consecrated by the Archbishop of Drontheim, but was unfortunately drowned with Harold king of Man, his queen, and almost all the nobility of the Isles; so that the Bishopric continued vacant almost six years,—when

**RICHARD**, A.D. 1252, an Englishman, was consecrated at Rome by the Archbishop of Drontheim. This bishop consecrated the Abbey Church of St. Mary of Rushen, anno 1257. After he had governed the Church twenty-three years, returning from a general council, anno 1274, he died “apud Langallyner in Copelandiâ,” and lieth buried in the Abbey of Furness. In his time the Scotch conquered the island. He was succeeded by

**MARKUS GALVADIENSIS**, A.D. 1275, commonly written Gallovedinus, at the nomination of Alexander king of Scotland; for which reason it is supposed he was banished by the Manxmen; during his absence the island lay under an interdict, but at last being recalled, he laid a Smoke Penny upon every house by way of commutation. He held a synod at Kirk Braddan, in which thirty-five canons were enacted\*. He lived to a great age, and was for many years blind, and lies buried in St. German’s Church, in Peel Castle, and was succeeded by

**ONANUS**†, A.D. 1298, of whom only the name is recorded.

**MAURITIUS**?, A.D. 1303, who was sent prisoner to London by King Edward I., therefore supposed never to be con-

\* “Constitutiones Synodales Soderensis Ecclesiæ in Synodo ordinatæ et statutæ in Ecclesiâ Sancti Bradani in Manniâ sexto idûs Martii, A.D. 1291.”—Ward’s Ancient Records, p. 129.

† Onanus or Inanus, given in Mr. Quayle’s MS. from Spotswood, Scottish Church, Book II. p. 116.

separated nor put into the catalogue of bishops. In his room was substituted

**ALLEN\***, A.D. 1305, of Galloway, who governed the Church with honour and integrity. He died the 15th of February, anno 1321, and lies at Rothersay, in Scotland. To him succeeded

**GILBERT**, A.D. 1321, of Galloway, who sat but two years and a half, and lies buried near his predecessor, in the church of Rothersay aforesaid. And after him

**BERNARD**, A.D. 1323, a Scotchman, held the bishopric thirteen years, and lies buried in the monastery of Kilwinning, or Arbroath, in Scotland, and was succeeded by

**THOMAS**, A.D. 1334, a Scot, who sat bishop fourteen years: he was the first that exacted twenty shillings of his clergy by way of procuration, as likewise the tenths of all aliens. He died the 20th of September 1348. The same year

**WILLIAM RUSSELL**, A.D. 1348, Abbot of Rushen, was elected by the whole clergy of Man, in St. German's Church, in Peel Castle. He was consecrated by Pope Clement VI. at Avignon, and was the first that shook off the yoke of the Archbishop of Drontheim, by whom his predecessors had for many ages been consecrated. He held a synod, anno 1350, in Kirk Michael, in which five articles were added to the former canons. He died the 21st of April 1374, and was buried in the Abbey of Furness: he was Abbot of Rushen eighteen years, and Bishop twenty-six years; and after him

**JOHN DUNKAN†**, A.D. 1374, a Manxman, was elected by the clergy of Man, and going to Avignon was confirmed by Pope Gregory XI., and consecrated "per Cardinalem

\* In the ancient Rolls of Scotland occurs this note:—"Allan of Wigh-town holds letters of presentation to the Church of St. Carber, in Man." This presentation to the living of Kirk Cairbre, or Arbory, took place in 1295. See Train's History, vol. i. p. 339.

† John Duncan is the last bishop mentioned in the 'Chronicon Manniæ.' The narrative tells us that on his installation in St. German's in 1376, "he received many great offerings."

Prenestinum, dudum Archiepiscopum :” in his return home he was made prisoner at Bolonia, in Picardy, and lay in irons two years, and at last was forced to ransom himself for 500 marks ; so that he was not installed till the year 1376. On his death the two sees were divided ; the clergy of Iona electing a bishop for the western Isles named John, and the clergy of Man electing

**ROBERT WELBY, or WALDBY, A.D. 1380**, who, it is believed, sat twenty-two years, and is said to have been translated to the see of Dublin\*. He had for his successor, according to Sacheverell,

**JOHN SPROTTON, A.D. 1402**, the first Bishop mentioned in the insular records. It is uncertain how long he sat Bishop, but in the Statute Book of the Isle of Man†, we find under date of 1430, mention made of a visitation the year before, held by

**RICHARD PULLEY, A.D. 1429**, of whom we have only the name. The next to him appears to have been

**JOHN GREEN‡, A.D. 1448**, Vicar of Dunchurch in Warwickshire, who continued to hold his English preferment with his bishopric. He died in 1452, and was succeeded by

**THOMAS BURTON, A.D. 1452**, who held the see twenty-eight years, and died in possession in 1480. After him

**RICHARD OLDHAM, A.D. 1481**, Abbot of Chester, who died September 19th, 1486, and was buried in the Abbey at Chester.

**HUAN, HUGH, or EVAN HESKETH, A.D. 1487**, succeeded him. In his time Thomas Stanley, King of Man and Earl of Derby, in a deed preserved by Dugdale§, dated March 28th, 1505, confirmed to him and his successors all the lands and possessions of his bishopric. He died in 1510, and was buried in his cathedral of St. German at Peel.

\* Keith's Catalogue of Scottish Bishops, p. 304.

† Miles's Statute Laws of the Isle of Man, p. 13.

‡ Appendix to Memoirs of Hildesley, p. 293.

§ Monasticon Anglicanum, vol. i. p. 7.

Whether the Bishopric was immediately filled up is uncertain. But it appears by an indenture in the *Lex Scripta* of the Isle of Man, that one

**JOHN**, A.D. 1510?, was Bishop in 1532\*. And we also learn that in the year 1542,

**THOMAS STANLEY**, son of Sir Edward Stanley, first Lord Monteagle, was holding the Bishopric: in his time the statute of 33 Henry VIII. was passed, dissevering the Isle of Man from Canterbury, and annexing it to York; and Bishop Stanley, not complying with these arbitrary measures of Henry, was deprived in 1545, and in his room was appointed

**ROBERT FERRAR**, or **FERRIER**, A.D. 1545, translated to St. David's in 1546†. He had been chaplain to Archbishop Cranmer in 1533. He was imprisoned during the reign of Edward VI., for his Lutheran opinions, and on Mary's accession to the Crown, he was condemned as a heretic, degraded, and burnt at the Market Cross, Caermarthen, March 30th, 1555.

**HENRY MANN**, A.D. 1546, D.D. of Oxford, and Dean of Chester, had the royal assent to his election to the See of Sodor and Man, January 22nd, 1546. He continued to hold the See in the reign of Mary, and died in quiet possession, October 10th, 1556, and was buried in St. Andrew's Undershaft Church, in London. On his death,

**THOMAS STANLEY**, A.D. 1556, was restored‡; nor was he again deprived on the accession of Elizabeth, but continued quietly to exercise his episcopal functions till his death in 1568§. He was also appointed Governor of the island

\* Ward's Ancient Records, p. 88.

† Stated in Burnet to have been consecrated in 1548.

‡ "Thus it appears that the See of Sodor and Man has never lost the regular succession of its Bishops, being the only diocese in the British Church of which that can be said."—Ward's Ancient Records, p. 89.

§ There is on the Isle of Man no record whatever of the period of the Reformation.

in 1556. Wood says that he paid his last debt to nature in the latter end of the year 1570. This is not unlikely, as it appears that his successor,

**JOHN SALISBURY**, Dean of Norwich and Chancellor of Lincoln, and Archdeacon of Anglesea, was consecrated in 1571. He had a share in translating the Bible into Welsh. He died in 1573, and was buried in Norwich Cathedral. After the not unusual custom of Elizabeth, the See was kept vacant three years, when

**JOHN MERRICK**, A.D. 1577, was sworn Bishop of the Isle. He gave Camden the History of the Isle of Man, published in his 'Britannia.' He died in 1599, and was immediately succeeded by

**GEORGE LLOYD**, A.D. 1600, Rector of Heswall, Cheshire, who was afterwards, January 14th, 1604, translated to the See of Chester, and in his room

**JOHN PHILLIPS**, D.D., A.D. 1605, Dean of Cleveland and Rector of Hawarden, Flintshire, succeeded. He was a native of North Wales, and is said to have translated the Bible and Prayer Book into Manx: the latter was extant in the days of Sacheverell. He was famous for his great pains in preaching, his charity and hospitality. He died August 7th, 1633, and was buried in St. German's Cathedral. After him

**WILLIAM FORSTER**, D.D.\*, A.D. 1633, Fellow of Catherine College, Cambridge, and Prebendary of Chester. He held a court at Douglas, October 1634, and died in the beginning of 1635.

**RICHARD PARR**, D.D., A.D. 1635, a Lancashire man, some time Fellow of Brazennose College in Oxford, who, whilst he continued in the University (says Mr. Challoner of his own knowledge), was an eminent preacher. He was the last who sat Bishop before the civil wars. He died in 1643. The See having been vacant seventeen years,

\* Sacheverell (who has been followed in this by Bishop Wilson) has placed his name inadvertently before John Phillips.

**SAMUEL RUTTER\***, A.D. 1661, was sworn Bishop. He had been Archdeacon several years, and governed the Church with great prudence during the civil wars : he was a man of exemplary goodness and moderation, and sat Bishop till the year 1663 ; “ to his assistance,” says Seacome, “ I am greatly obliged for his collections and memoirs made use of in my present history of the noble house of Stanley, but especially in that ever-memorable siege of Lathom ; the defence whereof he had a large share in.” After him

**ISAAC BARROW, D.D.**, A.D. 1663, was consecrated Bishop, and sent over Governor by Charles Earl of Derby. He was a man of a public spirit, and great designs for the good of the Church ; to his industry is greatly owing all the learning amongst the clergy of Man, and to his prudence and charity many of the poor clergy owe the bread they eat. This good man, to the great loss of the island, was removed to St. Asaph, and was succeeded by

**HENRY BRIDGEMAN, D.D.**, A.D. 1671. And after him

**JOHN LAKE**, A.D. 1682, afterwards removed, A.D. 1684, to Bristol. He was again translated to Chichester, 1685. On the 8th of June 1688, this prelate, with Sancroft, Lloyd, Ken, Turner, White and Trelawney, was committed to the Tower by James II. for petitioning him against the publication of his ‘ Declaration for Liberty of Conscience†.’ He died 1689.

**BAPTIST LEVINZ, D.D.**, A.D. 1684, who died 1693 ; and was succeeded by

\* The author of Mr. Quayle’s MS., writing at the close of the Great Rebellion, says, “ At my being in the Island, in place of the Bishop (sede vacante), the Church was governed by Mr. Rutter, the then Archdeacon of Man. A man more meriting to have succeeded than to have supplied the Bishop’s place and office.”

† See Bishop Short’s History of the Church of England, p. 566.



**THOMAS WILSON, D.D., A.D. 1697–98, who died in 1755.**

His praise is in all the Church.

**MARK HILDESLEY, D.D., A.D. 1755.** Under his auspices the Manx version of the Bible was consummated. He received the last portion of it on Saturday, November 28th, 1772, and on the Monday following was seized with the palsy, and died on the 7th of the ensuing month.

**RICHARD RICHMOND, D.D., A.D. 1773, was consecrated as successor, and died in London, February 4th, 1780.**

**GEORGE MASON, A.D. 1780, was the next Bishop, but only held the Bishopric three years. He died in 1783. His successor was**

**CLAUDIUS CREGAN, D.D., consecrated February 20th, 1784.** He was nominated by the Dowager Duchess of Athol during the minority of her son. On his death the appointment of his successor was kept open till the

**HON. GEORGE MURRAY, A.D. 1813, second son of Lord George Murray, Bishop of St. David's, and nephew to John the fourth Duke of Athol, was of age for consecration. The consecration took place in April 1813. In the year 1827 he was translated to Rochester, and**

**WILLIAM WARD, D.D., A.D. 1827, Rector of Great Hawksley, Essex, succeeded.** In his episcopate was passed the Act for uniting this See with Carlisle. Through the great exertion of the Bishop, seconded by his clergy and the leading members of the laity of the Church, together with the strong remonstrance of the Bishops of the English Church, this scheme was ultimately set aside. Bishop Ward was the means of adding largely to the church accommodation of the island\*, and he very greatly promoted the erection of King William's College. He died at Great Hawksley, in Essex, January 26th, 1838.

\* He succeeded in raising £8000 for this purpose in England, and nearly £4000 in the island. Out of this sum eight new churches were erected, and others enlarged.

To him succeeded, as the first nominee of the British Crown,

**JAMES BOWSTEAD**, A.D. 1838, late Tutor of Corpus Christi College, and Rector of Rettenden, Essex. He was created D.D. by Royal mandate\*. During the short period of his episcopacy on the island he established the Diocesan Society. On his translation to the See of Lichfield, 1840,

**HENRY PEPYS**, D.D., A.D. 1840, brother to Lord Chancellor Cottenham, succeeded†, but in the year following was translated to Worcester. His successor was

**THOMAS VOWLER SHORT**, D.D., A.D. 1841, Rector of St. George's, Bloomsbury, and formerly Tutor of Christ's Church, Oxford‡. At the close of 1846 he was translated to St. Asaph. The successor of Bishop Short in the See of Sodor and Man, was the

**VEN. WALTER AUGUSTUS SHIRLEY**, D.D., A.D. 1847, Archdeacon of Derby, who was installed at Castletown, February 1st, 1847. He had been appointed Bampton Lecturer for that year, and entered upon the first portion of his course in the Lent Term. He returned to Bishop's Court in the Easter vacation, where he was soon after seized by an attack of bronchitis, and on the 21st of April he expired, after an episcopate of only three months. His successor, the present Bishop, is the

**HON. ROBERT EDEN**, D.D., A.D. 1847, youngest son of William first Lord Auckland, and brother to George present Earl of Auckland, late Governor-General of India, and now First Lord of the Admiralty. His Lordship, who previous to his appointment to the Bishopric of Sodor and Man had been Fellow of Magdalen College, Cambridge, Chaplain to the Queen and Vicar of Battersea, Surrey, is

\* His installation took place in St. Mary's Chapel, Castletown, September 5th, 1838.

† Installed at Castletown, May 8th, 1840.

‡ Installed at Castletown, July 25th, 1841.

heir-presumptive to the barony of Auckland. His Lordship was installed at Castletown, June 29th, 1847.

The Bishop of Sodor and Man is the highest member in the Lower House of the English Convocation. He has a seat in the House of Lords, within the bar, apart from the other Bishops, but no vote\*. As the Bishop now, since the purchase of the Isle, no longer holds his barony from a subject, but directly from the Crown, it would appear that if the Sovereign should choose, he might be summoned to the House of Lords, unless the circumstance of his having a seat in an independent legislature within the dominions of Great Britain should seem to preclude him.

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Q. Page 242.

The following list of 222 species of the Carboniferous limestone fossils of the southern basin of the Isle of Man, is given from specimens in my own cabinet. By more diligent search the number would probably be largely increased. There is a small collection of Manx limestone fossils in the Museum of the Geological Society of London, of which no separate catalogue has been published. We have a notice of 14 species only as from the Isle of Man, in Phillips' 'Geology of Yorkshire,' and a few more are given in Sowerby's 'Mineral Conchology.' The present addition will therefore be useful, both as an addition to the British localities of the different fossils, and also as indicative of the different changes in the character of the marine fauna in the neighbourhood of the Isle of Man, at different periods of the carboniferous limestone formation.

\* In Crutwell's Life of Bishop Wilson, 4to, p. xxxiv. there is the following note:—

"If the island, as in case of treason, should become forfeit to the Crown, the Bishop, holding his barony from the Sovereign, would then have a vote as well as a seat. This information is from a gentleman on the authority of the present Earl of Abingdon's grandfather, who said that the Bishop of Man had a seat there *de suo jure*."

For the naming of the Cephalopoda in the subjoined list, I am chiefly indebted to the kindness of Count Keyserling, for the Corals to Professor Ansted, and for the Brachiopoda to the late Mr. Gilbertson. Having submitted to the last-named gentleman a series of specimens taken from the lower limestone deposit, he noted that he did not generally recognise the forms to which he had been accustomed in the mountain limestone of Yorkshire and Derbyshire. In the list will be found a few identifications with foreign specimens, given by Professor De Koninck in his work on the Carboniferous fossils of Belgium. I have also ventured to add a few provisional names for some fossils for which I could obtain no identification.

	Lower limestone.	Poolvaah limestone.	Posidonian schist.		Lower limestone.	Poolvaah limestone.	Posidonian schist.
<b>PLANTÆ.</b>				<i>Glauconome plumus</i> , var., <i>Phill.</i>	*	*	
<i>Adiantum</i> .....		*		<i>Lithodendron crassum</i> , <i>De Kon.</i>	*	*	
<i>Pecopteris</i> .....		*		— <i>fasciculatum</i> , <i>Flem.</i> .....	*	*	
<i>Sphenopteris nervosa</i> , <i>Brongn.</i>		*		<i>Michelinia favosa</i> , <i>Goldf.</i> .....	*		*
<i>Lepidostrobos ornatus</i> , <i>Brongn.</i>		*		<i>Pustulopora oculata</i> , <i>Milne</i>			
<i>Calamites</i> .....		*		— <i>Edwards</i> .....		*	
				<i>Syringopora ramulosa</i> , <i>Goldf.</i>	*		
<b>ZOOPHYTA.</b>				<b>ECHINODERMATA.</b>			
<i>Amplexus coralloides</i> , <i>Sow.</i> ...	*	*		<i>Platycrinus gigas</i> , <i>Phill.</i> .....	*		
— <i>spinosus</i> , <i>De Kon.</i> .....		*		—, unknown species .....		*	
<i>Cyathophyllum basaltiforme</i> ,				<i>Poteriocrinus crassus</i> , <i>Martin</i>	*		
var., <i>Phill.</i> .....		*		— <i>Egertoni</i> , <i>Phill.</i> .....	*		
— <i>fungites</i> , <i>De Kon.</i> .....	*	*		<b>ANNELIDA.</b>			
<i>Calamopora inflata</i> ?, <i>De Kon.</i>	*			Traces in shale beds .....	*		*
<i>Caunopora ramosa</i> , <i>Phill.</i> .....	*			<b>CRUSTACEA.</b>			
<i>Caninia gigantea</i> , <i>Michelin</i> ....	*			<i>Cythere Phillipsiana</i> .....		*	
<i>Favosites cætetes</i> , <i>Phill.</i> .....	*			<i>Cypridina ovalis mei</i> .....		*	
— <i>scabra</i> , <i>Rafinesque</i> .....	*			<i>Phillipsia gemmulifera</i> , <i>Phill.</i>		*	
— <i>Gothlandica</i> , <i>Phill.</i> .....		*		— <i>granulifera</i> , <i>Phill.</i> .....		*	
<i>Gorgonia fastuosa</i> , <i>De Kon.</i> ...	*	*		— <i>Kellii</i> , <i>Portl.</i> .....	*		
— <i>laxa</i> , <i>Phill.</i> .....		*		— <i>ornata</i> , <i>Portl.</i> .....	*		
— <i>polyporata</i> , <i>Phill.</i> .....		*		— <i>raniceps</i> , <i>Phill.</i> .....		*	
— <i>retiformis</i> , <i>Schloth.</i> .....	*	*		— <i>seminifera</i> , <i>Phill.</i> .....		*	
— <i>ripisteria</i> , <i>Goldf.</i> .....	*	*		— <i>truncatula</i> , <i>Phill.</i> .....		*	
— <i>striata mei</i> , n.s. ....	*			— unknown species .....			*
— <i>tortuosa mei</i> , n.s. ....		*					
— <i>tenuifila</i> , <i>Phill.</i> .....		*					
<i>Heteropora</i> , species unknown		*					

	Lower limestone.	Poolvaah limestone.	Posidonian schist.		Lower limestone.	Poolvaah limestone.	Posidonian schist.
<b>CONCHIFERA DIMYARIA.</b>				<b>Productus concinnus, Sow.</b> ...			*
<i>Cardinia abbreviata, De Kon.</i> ...	*			— <i>costatus, Sow.</i> .....			*
— <i>ovalis, De Kon.</i> .....	*			— <i>giganteus, Sow.</i> .....	*		*
— <i>tellinaria, Goldf.</i> .....	*			— <i>hemisphæricus, Sow.</i> .....	*		*
<i>Cardimorphia oblonga, Kon.</i> ...	*			— <i>fimbriatus, Sow.</i> .....	*	*	*
<i>Cypicardia striatola-mellosa,</i> <i>De Kon.</i> .....	*			— <i>latissimus, Sow.</i> .....	*	*	*
<i>Cucullæa arguta, Phill.</i> .....	*	*		— <i>lobatus, Sow.</i> .....	*	*	*
<i>Nucula claviformis</i> .....	*	*		— <i>longispinus, Sow.</i> .....	*	*	*
<i>Pinna flabelliformis, Martin.</i> ...	*	*		— <i>Martini, Sow.</i> .....	*	*	*
<i>Pleurorhynchus aliformis,</i> <i>Phill.</i> .....	*	*		— <i>mesolobus, Phill.</i> .....	*	*	*
— <i>minax, Phill.</i> .....	*	*		— <i>punctatus, Sow.</i> .....	*	*	*
<i>Sanguinolaria arcuata, Phill.</i> ...	*	*		— <i>quincuncialis, Phill.</i> .....	*	*	*
— <i>angustata, Phill.</i> .....	*	*		— <i>rarispinus, De Kon.</i> .....	*	*	*
— <i>sulcata, Phill.</i> .....	*	*		— <i>scabriculus, Sow.</i> .....	*	*	*
<i>Solemya primæva, Phill.</i> .....	*	*		— <i>spinosus, Sow.</i> .....	*	*	*
<i>Solen siliquoides, De Kon.</i> .....	*	*		— <i>striatus, Fischer</i> .....	*	*	*
				— <i>undatus, DeFr.</i> .....	*	*	*
<b>CONCHIFERA MONOMYARIA.</b>				<b>Spirifer attenuatus, Sow.</b> .....	*	*	*
<i>Avicula Dumontiana?, De Kon.</i> ...	*			— <i>bisulcatus, Sow.</i> .....	*	*	*
— <i>lævigata, De Kon.</i> .....	*	*		— <i>convolutus, Phill.</i> .....	*	*	*
— <i>lunulata, Phill.</i> .....	*	*		— <i>crispus, Linn.</i> .....	*	*	*
— <i>cycloptera, Phill.</i> .....	*	*		— <i>connivens, Phill.</i> .....	*	*	*
— <i>tessellata, De Kon.</i> .....	*	*		— <i>connivens, var.</i> .....	*	*	*
<i>Inoceramus vetustus, Sow.</i> .....	*	*		— <i>cuspidatus, Sow.</i> .....	*	*	*
<i>Posidonia Becheri, Phill.</i> .....	*	*	*	— <i>decorus, Sow.</i> .....	*	*	*
— <i>lateralis, Phill.</i> .....	*	*	*	— <i>duplicicostus, Phill.</i> .....	*	*	*
— <i>gracillima mei</i> .....	*	*	*	— <i>bisulcatus, Sow.</i> .....	*	*	*
<i>Pecten arenosus, Phill.</i> .....	*	*	*	— <i>glaber, Sow.</i> .....	*	*	*
— <i>dissimilis, Phill.</i> .....	*	*	*	— <i>globularis, Phill.</i> .....	*	*	*
— <i>hemisphæricus, Phill.</i> .....	*	*	*	— <i>integricostatus, Phill.</i> ...	*	*	*
— <i>plicatus, Sow.</i> .....	*	*	*	— <i>pinguis, Sow.</i> .....	*	*	*
— <i>fimbriatus, Phill.</i> .....	*	*	*	— <i>recurvatus, De Kon.</i> .....	*	*	*
				— <i>rotundatus, var., Sow.</i> ....	*	*	*
<b>BRACHIOPODA.</b>				— <i>rhomboidens, Phill.</i> .....	*	*	*
<i>Leptæna corrugata mei.</i> .....	*			— <i>semicircularis, Phill.</i> .....	*	*	*
— <i>depressa, Dalm.</i> .....	*			— <i>senilis, Phill.</i> .....	*	*	*
— <i>papilionacea, Phill.</i> .....	*			— <i>striatus, Sow.</i> .....	*	*	*
— <i>sarcinulata, D'Archiac</i> <i>et De Verneuil</i> .....	*	*	*	— <i>undulatus, Sow.</i> .....	*	*	*
<i>Orthis crenistria</i> .....	*	*	*	<b>Terebratula acuminata, Sow.</b> ...	*	*	*
— <i>resupinata, Phill.</i> .....	*	*	*	— <i>ambigua, Phill.</i> .....	*	*	*
— <i>Sharpei, Morris</i> .....	*	*	*	— <i>excavata, Phill.</i> .....	*	*	*
— <i>umbraculum, var., De</i> <i>Buch</i> .....	*	*	*	— <i>excavata, var.</i> .....	*	*	*
<i>Productus antiquatus, Sow.</i> ...	*	*	*	— <i>hastata, Sow.</i> .....	*	*	*
— <i>auritus, Phill.</i> .....	*	*	*	— <i>mesogona, Phill.</i> .....	*	*	*
— <i>comoides, Sow.</i> .....	*	*	*	— <i>pleurodon, Phill.</i> .....	*	*	*
				— <i>pugnis, Sow.</i> .....	*	*	*
				— <i>sacculus, Sow.</i> .....	*	*	*
				— <i>trilatera, De Kon.</i> .....	*	*	*

	Lower limestone.	Poolvash limestone.	Posidonian schist.		Lower limestone.	Poolvash limestone.	Posidonian schist.
<b>GASTEROPODA.</b>							
<i>Buccinum acutum</i> , Sow. ....	*	*		<i>Cyrtoceras unguis</i> , Phill. ....	*	*	
— <i>imbricatum</i> , Sow. ....	*	*		— <i>obliquatum</i> , Phill. ....	*	*	
<i>Cirrus rotundatus</i> , Sow. ....	*	*		— <i>Poolvashii mei</i> , n.s. ....	*	*	
— <i>tabulatus</i> , Phill. ....	*	*		— <i>rugosum</i> , Fleming. ....	*	*	
<i>Chemnitzia Lefebvrei</i> , De Kon. ....	*	*		— <i>tessellatum mei</i> , n.s. ....	*	*	
— <i>curvilineum</i> ?, De Kon. ....	*	*		<i>Goniatites crenistria</i> , Phill. ....	*	*	
— <i>elongata</i> , De Kon. ....	*	*		— <i>evolutus</i> , Phill. ....	*	*	
— <i>rugifera</i> , De Kon. ....	*	*		— <i>Henslowi</i> , Phill. ....	*	*	
<i>Euomphalus carbonarius</i> ....			*	— <i>implicatus</i> , Phill. ....	*	*	
— <i>catillus</i> , Sow. ....	*	*		— <i>intercostalis</i> , Phill. ....	*	*	
— <i>pentangulatus</i> , Sow. ....	*	*		— <i>micronotus</i> , Phill. ....	*	*	
— <i>pugilis</i> , Phill. ....	*	*		— <i>obtusum</i> , Phill. ....	*	*	
<i>Murchisonia</i> , unknown species ....	*	*		— <i>reticulatus</i> , Phill. ....	*	*	
— <i>Humboldtiana</i> , De Kon. ....	*	*		— <i>sphaericus</i> , Phill. ....	*	*	
<i>Natica ampliata</i> , Phill. ....	*	*		— <i>striolatus</i> , Phill. ....	*	*	
— <i>elliptica</i> , Phill. ....	*	*		— <i>truncatus</i> , Phill. ....	*	*	
— <i>elongata</i> , Phill. ....	*	*		<i>Gyroceras serratum</i> , De Kon. ....	*	*	
— <i>lirata</i> , Phill. ....	*	*		<i>Nautilus biangulatus</i> , Sow. ....	*	*	
— <i>neritoides</i> , Phill. ....	*	*		— <i>bistrialis</i> , Phill. ....	*	*	
<i>Patella pileus</i> , Phill. ....	*	*		— <i>complanatus</i> , Sow. ....	*	*	
— <i>mucronata</i> ....	*	*		— <i>cyclostomus</i> , Phill. ....	*	*	
<i>Pileopsis angustus</i> , Phill. ....	*	*		— <i>ingens</i> , Phill. ....	*	*	
— <i>extensus mei</i> , n.s. ....	*	*		— <i>oxystomus</i> , Phill. ....	*	*	
<i>Pleurotomaria acuta</i> , Phill. ....	*	*		— <i>subsulcatus</i> , Phill. ....	*	*	
— <i>concentrica</i> , Phill. ....	*	*		— <i>sulcatus</i> , Phill. ....	*	*	
— <i>conica</i> ?, Phill. ....	*	*		— <i>pinguis</i> , De Kon. ....	*	*	
— <i>coronata mei</i> , n.s. ....	*	*		<i>Orthoceras calamus</i> , De Kon. ....	*	*	
— <i>catenata</i> , De Kon. ....	*	*		— <i>cinctum</i> , Sow. ....	*	*	
— <i>expansa</i> , Phill. ....	*	*		— <i>cætetes mei</i> , n.s. ....	*	*	
— <i>gemmulifera</i> , Phill. ....	*	*		— <i>dentaloideum</i> , Phill. ....	*	*	
— <i>glabrata</i> , Phill. ....	*	*		— <i>distans</i> , Sow. ....	*	*	
— <i>linealis mei</i> , n.s. ....	*	*		— <i>dilatatum</i> , De Kon. ....	*	*	
— <i>naticoides</i> , De Kon. ....	*	*		— <i>filiferum</i> , Phill. ....	*	*	
— <i>ovoidea</i> , Phill. ....	*	*		— <i>fusiforme</i> , Sow. ....	*	*	
— <i>sulcatula</i> , Phill. ....	*	*		— <i>Gesneri</i> , Mart. ....	*	*	
<i>Solarium radians</i> , De Kon. ....	*	*		— <i>giganteum</i> , Sow. ....	*	*	
<i>Trochus biserratus</i> , Phill., var. ....	*	*		— <i>laterale</i> , Phill. ....	*	*	
				— <i>Martineanum</i> , De Kon. ....	*	*	
				— <i>Muensterianum</i> , De Kon. ....	*	*	
				— <i>ovale</i> , Phill. ....	*	*	
				— <i>pyriforme</i> , Sow. ....	*	*	
				— <i>prolongatum mei</i> , n.s. ....	*	*	
<b>HETEROPODA.</b>							
<i>Bellerophon apertus</i> , Sow. ....	*	*					
— <i>cornu arietis</i> , Sow. ....	*	*					
— <i>hiulcus</i> , Sow. ....	*	*					
— <i>tenuifascia</i> , Sow. ....	*	*					
— <i>Woodwardii</i> , Phill. ....	*	*					
<b>CEPHALOPODA.</b>							
<i>Cresæis primæva</i> ?, Forbes ....	*	*	*	<b>PISCES.</b>			
— <i>calamus mei</i> , n.s. ....	*	*	*	<i>Helodus lævissimus</i> , Agass. ....	*	*	
				— <i>planus</i> , Agass. ....	*	*	
				<i>Psammodus porosus</i> ....	*	*	
				— <i>rugosus</i> ?, Agass. ....	*	*	

The following analysis of the above list for each of the deposits is interesting:—

	Lower limestone.	Poolvash limestone.	Posidonian schist.
Plantæ .....	0	0	5
Zoophyta .....	16	14	2
Echinodermata .....	3	1	0
Annelidæ .....	1	0	1
Crustacea .....	2	7	1
Conchifera Dimyaria .....	3	13	0
Conchifera Monomyaria .....	7	9	3
Brachiopoda .....	22	48	4
Gasteropoda .....	6	31	4
Heteropoda .....	2	4	0
Cephalopoda .....	11	26	18
Pisces .....	3	0	1
Total number in each deposit...	76	153	39

In order to show a reason for the separation which I have made of the Carboniferous limestone series of the Isle of Man into the three divisions of—1st, *Lower limestone*; 2nd, *Poolvash limestone*; 3rd, *Posidonian schist*, it will be sufficient to call attention to the following facts, as seen in the above table, viz. that—

Of the 222 species named and located in it we have only

30 common to 1st and 2nd.

8 — 1st and 3rd.

11 — 2nd and 3rd.

3 — 1st, 2nd and 3rd.

Again, of the 76 species occurring in the 1st, 40, or more than 50 per cent., are found in it only.

Of the 153 species occurring in the 2nd, 117, or 76 per cent., are found in it only.

Of the 39 species found in the 3rd, 20, or just 50 per cent., belong to it alone.

The fossils characteristic of the lower limestone series seem to be "*Orthis Sharpei*," "*Productus hemisphaericus*," "*Caulonopora ramosa*," *Favosites cætetes*, and the larger variety of

the *Cyathophyllum fungites*. The localities for obtaining them are the little creek of Ronaldsway, Strandhall to the westward of Poolvash, and Port St. Mary. At Scarlet, near the limekilns, the specimens of *Ammonites Henslowii* and *Nautilus complanatus*, which are in the Woodwardian Museum, Cambridge, were obtained. I am not aware that the latter fossil has elsewhere been found. There are many examples of it on the surface of a bed of limestone at Scarlet, but extremely difficult of extraction. Of the *Ammonites Henslowii*, which is a rare and beautiful fossil, I have found three examples.

The upper or Poolvash limestone fossils are found in great abundance about a quarter of a mile westward of the mouth of the streamlet from Balladoole. The characteristic fossils are *Orthis resupinata*, *Terebratula excavata*, *Productus striatus (anomalus)*, and *Goniatites crenistria*, all very abundant.

The Posidonian schist is found at the mouth of the Balladoole streamlet. A little to the eastward, just at high-water mark, fossils occur in it as a sulphuret of iron; these are chiefly *Goniatites* and *Orthocerata*, not found in any other locality. The *Posidonia* is a plentiful and characteristic fossil in all the black schistose beds. The ferns and *Favosites Gothlandica* may be met with in a hollow near three dykes, about 300 yards westward of the Balladoole stream.

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R. Page 246.

The following list of forty fossil species from the Pleistocene marine formation of the Isle of Man, collected by myself, and named by Professor E. Forbes, has already in part appeared in my memoir in the Quarterly Journal of the Geological Society, vol. ii. p. 346; it contains however several interesting additions made since the publication of my memoir. The fullest account of Pleistocene fossils hitherto published will be found in the valuable memoir of Professor E. Forbes on the geological relations of the existing fauna and flora of the British Isles, which



forms a portion of the first volume of the 'Memoirs of the Geological Survey of Great Britain.'

## MAMMALIA.

The rib of a cetacean, species unknown, found in the drift at Douglas.

## MOLLUSCA.

Order *Palliobranchiata*.

- Macra solida*.  
*Corbula nuclea*.  
*Tellina solidula*.  
*Astarte borealis*.  
 — elliptica; the *giarensis* of Mr. Nicol.  
 — *damnoniensis*.  
 — *compressa*.  
 — *pisiformis*.  
*Cyprina islandica*.  
*Artemis exoleta*.  
*Venus casina*.  
 — *gallina*.  
*Cardium edule*.  
 — *lævigatum*.  
*Pectunculus pilosus*.  
*Pullustra decussata*.  
*Leda minuta*; the *Nucula rostrata* of Sowerby.  
 — *rostrata*; the *Nucula oblonga* of Brown.

## GASTEROPODA.

- Dentalium entale*.  
*Patella vulgata*.  
*Littorina littorea*.  
*Turritella terebra*.  
*Murex erinaceus*.  
*Fusus Bamffius*.  
 — *scalariformis*.  
 — *Forbesi*; distinct from the *Fusus cinereus* of Say.  
 — *antiquus*.  
*Pleurotoma turricula*.  
 — *lævigata*.  
*Buccinum undatum*.  
 — (*ciliatum*?).  
*Purpura lapillus*.  
*Nassa Monensis*.  
 — *reticulata*.  
 — *macula*.  
*Natica clausa*.

## CIRRIPEDA.

- Balanus communis*.  
 — *uddevallensis*.

## S. Page 252.

The flora of the Isle of Man is singularly deficient in interest, so far as the presence of rarities distinguishes it. Considered however with respect to the British flora generally, and especially as bearing on the geological history of that flora, it is not unimportant.

The greatest part of the plants of the British Isles are colonists from Central Europe. They emigrated hither after the upheaval and over the upraised bed of the Pleistocene sea. Of such plants, as might be expected, the rarer species are to be met with in the eastern English counties, whilst those only capable of the greatest diffusion, and consequently of becoming commonest, found their way to Ireland and the Isle of Man

before the breaking up of that portion of the upraised Pleistocene sea-bed which occupied the area of the now Irish Sea. This event happening before some plants generally common in England had diffused themselves so far, excluded them from our Manx flora.

Before this upheaval of the Pleistocene sea-bed, such parts of Britain as were above water existed in the condition of islands in an ice-charged sea, or of land connected with other land very far north, whence a vegetation of a boreal or arctic character was derived. This vegetation still remains on the summits of the Scottish, Cumberland and Welsh mountains, and consists of alpine plants in the north of Scandinavia. These plants in the north of Scandinavia, where climatal conditions nearly similar to those which prevailed within our area during the Pleistocene epoch are still maintained, are there seen not only on the mountains, but growing to the edge of the shore.

In the Isle of Man we have no trace of this flora. There are no alpine plants upon our mountains, which in all probability were during some part of the Pleistocene epoch wholly submerged\*.

In the south of England and south of Ireland there is a flora consisting of such plants as are commonest in the west of France, and which must have emigrated at the time of the union of those parts of our islands with the continent. Of such we have no traces on the Isle of Man, nor of the peculiar Asturian flora which gives a character to the vegetation of the hills in the west of Ireland.

The few rare Manx plants belong to an assemblage the history of which has not yet been developed. They are essentially *western*, either peculiar to the western parts of Britain and to Ireland, or found chiefly in the western and south-

\* I have the permission of Professor Forbes, in reference to the above hypothesis, to direct attention to the facts which I have stated in the body of the work, tending to establish the probability of great ice-charged waves sweeping over the mountain summits, which would most effectually destroy any previously existing flora. See page 178, *supra*.—J. G. C.

western coasts of Europe. They may possibly be fragments of the flora of the great western extension of Europe, the existence of which geological investigations have rendered probable during a period beginning about the close of the Miocene epoch, and terminating just before the historical.

Our rarest plants, as the *Sinapis Monensis*, the *Campanula hederacea*, *Pinguicula lusitanica*, *Euphorbia portlandica*, and *Scirpus Savii*, are instances. *Radiola millegrana*, *Centunculus minimus*, *Linum angustifolium* and *Carum verticillatum*, all plants worth gathering, were probably companions of these.

The localities and distribution of such Manx plants as are worthy of notice may briefly be narrated.

On the slaty rocks which form cliffs overhanging the sea, between Douglas and Maughold Head, Douglas and Coshmahawin, Peel and Spanish Head, and the Calf Islet, are not a few plants worth gathering. The most general of these are the *Scilla verna*, a very beautiful species of Squill, flowering in great profusion during spring and summer, and scenting the air with its fragrance. *Cochlearia grænlandica* and other species of scurvy grass are common. *Arenaria marina*, *Plantago maritima*, *Statice Armeria* (the sea-pink), *Pyrethrum maritimum*, and *Silene inflata* are everywhere abundant. The samphire, *Crithmum maritimum*, grows profusely among the rocks in many places. The sea-kale, *Crambe maritima*, occurs near Dalby. The handsome *Lavatera arborea* is found on the Calf and at Spanish Head. The *Artemisia maritima* (var. *gallica*) is abundant on the rocks near Kirk Santon. *Rhodiola rosea* occurs near Peel. *Scutellaria minor*, *Scirpus Savii* and *Pinguicula rosea* are frequent in damp ravines opening to the sea, and may all be gathered abundantly in those between the Crescent and Banks' How, near Douglas. In a field on the summit of the cliffs above Derby Castle in the same neighbourhood, the beautiful and scarce wild flax *Linum angustifolium* grows in profusion.

On the mountains few plants worthy of note occur. *Listera cordata*, an orchidaceous plant, has been found on Snaefell.

*Listera ovata* is not uncommon. *Viola lutea* occurs with *Gnaphalium dioicum*; also *Empetrum nigrum*; *Rubus saxatilis* and *Salix pentandra* grow in Sulby Glen, at the mouth of which is the only locality where *Verbascum Thapsus* (Jacob's ladder) has yet been met with apparently wild.

In moorlands, both on the mountains and near the sea, the curious *Hypericum elodes* is very abundant. *Anagallis tenella*, the prettiest of pimpernels, is common in such places, especially beside springs. *Rubus Koehleri* is not uncommon among our brambles on a clayey soil.

On the limestone near Castletown the plant most worthy of notice is the scarce *Erodium maritimum*. It is very abundant near Scarlet. *Ænanthe pimpinelloides* occurs in wet places near the sea.

Most of the plants noted as growing on the slate sea cliffs occur also on the limestone rocks by the shore. The henbane, *Hyoscyamus niger*, grows at Poolvash.

The sandy tract of the north furnishes several interesting plants. *Convolvulus Soldanella* ornaments the sea-side near Ballaugh. *Salsola Kali*, *Cakile maritima*, *Polygonum Raii*, *Arenaria peploides*, and various species of *Atriplex* are common on the shores. On the grassy summits of the sandy brows bounding them may be found *Cerastium tetrandrum*, *Sagina maritima*, *Myosotis Collina*, *Carex arenaria*, *Phleum arenarium*, *Triticum loliaceum* and *Vicia lathyroides*: *Cerastium arvense* and *Lepidium Smithii* occur in the sandy fields in several localities (also near Castletown). The rare *Sinapis Monensis* is found expanded in the sand, and sending out long peduncles bearing bright yellow flowers, through a great part of the north, especially near Ramsey and Jurby. It occurs also on the sand-hills near Douglas, and may be gathered in the grounds of Castle Mona. *Orobanche major* occurs near Ramsey.

A curious tetragonal variety of the eyebright, *Euphrasia officinalis*, and a peculiar form of *Polygala*, apparently distinct from *Polygala vulgaris*, and probably identical with *Polygala oxyptera*, are frequent in sandy fields near Ballaugh. *Stachys*

*ambigua* is frequent in the damper parts of the sandy districts of the north, and *Scirpus maritimus* occurs in pools in Andreas. *Glaux maritima* is frequent in wet places near the shore, both in the north and near Castletown. *Mentha pulegium*, the pennyroyal, grows in many places where there are marl pits. In the peat bogs we find *Alisma ranunculoides*, *Sparganium simplex* and *Lycopus europæus*.

In many places on all soils we find *Hypericum androsæmum*, *Rosa spinosissima* and *tomentosa*, *Rubus carpinifolius*, *Sedum anglicum*, *Cotyledon umbilicus* and *Lamium intermedium*.

Our most striking ferns are the very rare and beautiful *Adiantum Capillus Veneris*, which has been gathered at Glen Meay, and in caves at Santon; and the handsome *Osmunda regalis*, which grows in many places throughout the island, but is especially abundant and very luxuriant in the peat bogs of the north. *Aspidium Thelypteris*, *Polypodium dryopteris* *Botrychium lunaria* occur in many places.

Among common English plants very rare in the Isle of Man, the dead nettle, *Lamium album*, and the black nightshade, *Solanum nigrum*, may be mentioned.

Some scarce plants occur which appear to have been introduced either accidentally or by design. Such are *Reseda fruticulosa*, which grows near Castletown, and on the wall of the Rectory at Ballaugh; *Gnaphalium margaritaceum*, which occurs on hedges in Andreas; *Onopordum Acanthium* (the great thistle) near Ramsey; *Fœniculum vulgare*, not rare near houses; and *Melilotus leucantha*, occasional and apparently introduced with corn. *Erysimum cheiranthoides* has been met with on the road between Ramsey and Kirk Michael, and *Calamintha Nepeta* in the same district.

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T. Page 253.

The following Tables have been compiled from the Journals kept at the Point of Ayre Lighthouse in 57° 27' N. lat., 4° 20' W. long., elevated 106 feet above the medium level of the sea, and from that at Calf of Man Lower Lighthouse, lat. 54° 5' N.,

4° 46' W. long., at 275 feet above the sea. In consequence of the elevation and exposure of the points at which the observations were made, the mean temperature is determined somewhat lower than the reality.

TABLE I.—*An Average of Twenty Years, from 1825–44 inclusive.*

POINT OF AYRE							
Averages for periods of five years each.	Thermometer.		Barometer.		Rain-gauge.	Wet and cloudy days.	Clear days.
	9 A.M.	9 P.M.	9 A.M.	9 P.M.			
From 1825–29 inclusive	51°789	50°438	29°878	29°878	23°77	155	210
From 1830–34 inclusive	50°663	49°720	29°868	29°864	27°43	299	66
From 1835–39 inclusive	48°240	47°647	29°843	29°833	29°07	347	18
From 1840–44 inclusive	48°748	48°056	29°766	29°617	28°11	312	53
Average for 20 years, from 1825–44 inclusive	49°860	48°965	29°739	29°798	27°09	278	87

CALF OF MAN.							
From 1825–29 inclusive	49°863	49°253	29°669	29°672	19°78	124	241
From 1830–34 inclusive	49°397	49°145	29°605	29°606	25°04	186	179
From 1835–39 inclusive	47°297	47°271	29°507	29°502	23°93	269	96
From 1840–44 inclusive	47°999	48°182	29°454	29°682	24°253	247	118
Average for 20 years, from 1825–44 inclusive	48°691	48°463	29°558	29°615	23°25	226	139

Hence we obtain mean annual temperature for the whole island, from 1825–44 inclusive, 48°995, or nearly 49° Fahrenheit = 9°35 Centigrade. Mean annual fall of rain, 25·17 inches. Clear days, 113. Wet and cloudy days, 252.

The following Table gives a comparative view of the temperature of the Isle of Man and some other portions of Europe, as stated by Baron Humboldt in his 'Cosmos.' The scale used is the Centigrade.

TABLE II.

Places.	Year.	Winter.	Spring.	Summer.	Autumn.	Latitude.	Height above sea.
Isle of Man .....	9 39	5 53	7 9	13 16	10 71	54 12	
Dublin .....	9 5	4 6	8 4	15 3	9 8	53 23	0
Berlin .....	8 6	0 6	8 1	17 5	8 6	52 31	16
Bordeaux .....	13 9	6 1	13 4	21 7	14 4	44 50	4
Strasbourg .....	9 8	1 2	10 0	18 1	10 0	48 35	75

TABLE IV.—Average Monthly Meteorological Table, from Observations taken at the Calf of Man and Point of Ayre for a period of Seventeen Years, from 1831 to 1847 inclusive.

Calif of	Thermometer.	Barometer.		Rain- gauge.	Rainy days.	Snowy days.	Foggy days.	Clear days.	Direction of the Wind.										
		9 A.M.	9 P.M.						N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	V.	
January { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... Average for 17 years for the Island ....}	9 A.M.	9 P.M.	9 A.M.	9 P.M.	2-13	8-2	1-4	10	11-4	1-2	2-8	1-6	6	5-2	5-4	2-2	2-4	.....	5-2
	41-741	41-764	29-179	29-620	2-13	8-2	1-4	10	11-4	1-2	2-8	1-6	6	5-2	5-4	2-2	2-4	.....	5-2
	39-915	40-367	29-439	29-431	1-29	11	3-8	8	10-2	1-4	1-6	3-6	4-4	2-4	6	4	4	-2	3-4
	41-146	41-791	29-412	29-404	2-43	11-2	2-1	6-7	15-7	2-2	1-2	1-2	6-1	1-5	5	2-7	5-5	-2	4-2
	41-734	42-050	29-885	29-888	2-34	1-2	1	26-3	2-5	1-8	1-4	1-8	6-4	4	4-6	4-6	3	1	3-4
Point of Ayre. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... Average for 17 years for the Island ....}	9 A.M.	9 P.M.	9 A.M.	9 P.M.	1-80	6-6	6-8	16	1-6	1-2	2-4	2-4	4-2	1-6	5	5-4	4-2	6	4
	40-663	41-055	29-759	29-754	3-04	10-7	4-4	13	3-1	1-1	1-4	1-4	6-1	2	4-3	4-4	4-4	.....	4-8
	40-777	41-188	29-542	29-626	2-17	8-1	3-2	13-3	7-2	1-4	1-8	2-0	5-5	2-7	5-5	3-7	3-9	-3	4-1
	40-619	40-860	29-597	29-595	1-592	7-5	2-8	11-7	6-1	2-3	1-4	1-7	4-4	2-3	5-4	3-1	3-4	-1	3-6
	40-619	40-860	29-597	29-595	1-592	7-5	2-8	11-7	6-1	2-3	1-4	1-7	4-4	2-3	5-4	3-1	3-4	-1	3-6
Calif of	Thermometer.	Barometer.		Rain- gauge.	Rainy days.	Snowy days.	Foggy days.	Clear days.	Direction of the Wind.										
		9 A.M.	9 P.M.						N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	V.	
February { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... Average for 17 years for the Island ....}	9 A.M.	9 P.M.	9 A.M.	9 P.M.	2-316	8-2	1-8	8-8	8-6	1-4	4	4	3-6	3-6	6-8	3-6	4	.....	4-4
	42-697	43-055	29-529	29-478	2-316	8-2	1-8	8-8	8-6	1-4	4	4	3-6	3-6	6-8	3-6	4	.....	4-4
	38-981	39-406	29-419	29-405	1-72	10	2-8	7-4	7-6	2-2	1-4	2-6	4-8	1-8	4-6	4-2	1-4	.....	3-4
	39-466	39-799	29-372	29-454	1-56	9-5	2-8	5-5	12	5-8	2	2	4-1	1-6	4-1	1-4	4	.....	4-1
	43-269	43-275	29-740	29-772	2-09	8	2-8	23-8	8	1	8	8	2-8	2-4	7-8	5	5-4	-2	2-4
Point of Ayre. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... Average for 17 years for the Island ....}	9 A.M.	9 P.M.	9 A.M.	9 P.M.	1-82	7-8	3-2	15-8	1-6	6	1-6	2-3	5-6	2-2	6-2	3	3	4	3-2
	39-151	39-548	29-758	29-698	1-82	7-8	3-2	15-8	1-6	6	1-6	2-3	5-6	2-2	6-2	3	3	4	3-2
	40-154	40-079	29-764	29-763	2-21	8-9	3-7	9-3	6	3	2-4	2-1	5-6	2-5	3-2	3-4	2-8	-4	4-1
	40-619	40-860	29-597	29-595	1-592	7-5	2-8	11-7	6-1	2-3	1-4	1-7	4-4	2-3	5-4	3-1	3-4	-1	3-6
	40-619	40-860	29-597	29-595	1-592	7-5	2-8	11-7	6-1	2-3	1-4	1-7	4-4	2-3	5-4	3-1	3-4	-1	3-6

March Calf of Man. Point of Ayre. Average for 17 years for the Island ....	1831 to 1835 ...	42-248	42-742	29-605	29-619	1-85	4-8	1-2	10-4	13-6	2-4	2-6	1-4	3-4	2-4	4-4	3	3-8	.....	5-6
	1836 to 1840 ...	39-981	40-212	29-368	29-468	1-40	6-8	5-2	9-8	9-2	2-4	2-4	2-4	4-8	1-2	4-2	3	4	-2	6-2
	1841 to 1847 ...	41-495	42-235	29-420	29-461	1-41	12-2	1-1	8-5	12-2	1-5	2-4	2-1	4-5	2-7	3-8	3-1	4-2	-1	3-1
	1831 to 1835 ...	44-224	43-477	29-899	29-902	2-13	-4	4	24-6	2	1	2-4	2-8	2-4	-8	6	4-6	5-8	-6	4-5
	1836 to 1840 ...	42-595	40-360	29-820	29-857	1-74	5-2	5-6	5-2	3-6	-8	2-6	2-8	3-2	1-8	2-2	6-2	4-4	-6	6-4
April Calf of Man. Point of Ayre. Average for 17 years for the Island ....	1831 to 1835 ...	46-016	49-679	29-655	29-260	5-14	4	.....	5-4	18-6	3-6	1-2	3-4	5-2	2-8	3-2	1-8	2-6	.....	7-8
	1836 to 1840 ...	42-526	42-259	29-542	29-548	1-15	8-2	4	7-4	10-2	2-6	2-4	1	2-6	2	3-8	1-6	4-6	-2	9-2
	1841 to 1847 ...	44-737	44-666	29-528	29-510	1-56	10-3	1-1	8-1	13-6	2-6	1-3	2-5	4-4	1-5	4	2-3	2-5	-4	7
	1831 to 1835 ...	47-106	46-026	29-956	30-153	-98	-6	.....	27-4	1-8	2-4	2	4	2-4	1-6	3-8	4-0	3-6	4	5-6
	1836 to 1840 ...	43-839	43-099	29-909	29-913	1-22	8-2	2-6	17-4	1-8	2-6	2-6	2	1-8	1	2	4-8	3-4	-2	9-6
Average for 17 years for the Island ....	1841 to 1847 ...	45-376	45-251	30-398	29-841	1-78	10-4	1-3	11-1	7-1	2	1-5	2-7	2-5	1-2	3-1	3-1	2-7	1-5	9-1
	Average for 17 years for the Island ....	44-933	45-130	29-831	29-704	2-03	6-9	1-4	12-8	2-5	2-6	1-8	2-4	2-8	3-1	3-1	2-9	3-2	1-6	8-1



Calif of Man. Ayre. Point of	Thermometer.		Barometer.		Rain- gauge.	Rainy days.	Snowy days.	Foggy days.	Clear days.	Direction of the Wind.									
	9 A.M.	9 P.M.	9 A.M.	9 P.M.						N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	O.	V.
May	1831 to 1835 ...	50-558 49-941 29-664 29-674	1-22	6-6	.....	6-2	19-6	4-6	2-6	3-4	5-2	2-2	4	1-6	3	.....	5-4		
	1836 to 1840 ...	48-035 48-050 29-645 29-648	1-06	6-6	8 11	12-6	3-8	3	3-8	4-2	1	3-4	4	2-4	1	7-4			
	1841 to 1847 ...	49-051 49-282 29-565 29-546	2-06	9-7	.....	6-7	13-2	3-8	1-1	4-4	3-7	2-7	5	1-4	2-1	1-8	6-4		
	1831 to 1835 ...	52-754 50-961 29-957 30-084	1-49	1	.....	28	2	1-4	1-6	4-8	3	1-8	4-4	2-2	3-6	4	7-8		
	1836 to 1840 ...	49-117 48-147 30-123 29-744	1-00	6	6	22-6	1-4	7	3-8	4-6	1-6	4	2-6	4-4	3-2	4	7-6		
	1841 to 1847 ...	51-247 50-704 29-284 29-272	1-90	10-1	2 11-5	9	-7	5-7	2	2	1-8	4	3	3-4	1	7-1			
Average for 17 years for the Island ....		50-255 49-514 29-659 29-661	1-45	6-6	2 14-3	9-6	2-9	2-9	3-8	3-2	1-6	3-9	2-2	2-9	-7	7			
June	1831 to 1835 ...	54-973 53-566 29-611 29-610	2-03	6	.....	1-4	9-4	4-2	1-2	6	2-2	5	5-2	2-6	3	2	5-8		
	1836 to 1840 ...	52-977 51-879 29-513 29-508	1-76	1-14	.....	12-2	8-4	8	8	1-4	3-6	3-4	8-4	1	2	4	6		
	1841 to 1847 ...	54-452 53-857 29-585 29-583	2-07	8-4	.....	8-7	1-7	4	1-5	2-1	2-4	2-2	6	1-5	2-7	1	6-5		
	1831 to 1835 ...	54-608 54-299 29-881 29-905	2-17	.....	.....	28	2	1	8	1	6	1	4	5	6	5	6		
	1836 to 1840 ...	54-673 53-266 29-880 29-716	2-27	8-4	.....	18-8	8	6	6	1-6	1-4	2-4	4-6	4-8	4	2	7-2		
	1841 to 1847 ...	55-280 54-883 29-952 29-934	2-14	9-1	.....	14	7	7	1-1	1-8	1-4	2-2	4	5-4	4-5	3	5-7		
Average for 17 years for the Island ....		54-460 53-626 29-738 29-708	2-07	4-6	.....	7-4	3-6	1	1	1-4	1-9	1-8	5-6	2-3	1-4	-7	6-2		

July Calf of Man. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... }	57-664	55-136	29-707	29-884	1-99	5-4	.....	9-2	16-4	6	2-4	1-8	2-6	4	5-2	2-4	1-6	.....	5-8
	54-793	54-188	29-564	29-526	2-94	16-2	.....	9-2	7-6	3-6	-6	1-2	1-8	2-6	6-4	3-6	4-2	-4	6-6
	55-396	54-836	29-564	29-563	2-59	10-0	.....	7-0	15-1	5-1	-4	-7	3-1	1-5	5-7	1-7	6-7	-8	6-4
	60-862	57-741	30-006	29-988	1-88	.....	2	29-8	1	1	-6	1-6	2-4	2	-4	4-8	7-8	-4	6-2
	56-702	55-425	29-881	29-889	3-54	13	2	16-6	1-2	-6	-2	-4	1	1-6	6-2	8-8	5	.....	7-2
Point of Ayre. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... }	57-320	56-231	29-356	29-455	2-27	8	.....	13-4	7-8	1	1	1-1	1-4	1-4	4-8	6-8	6-2	1	6
Average for 17 years for the Island ... }	57-123	55-592	29-679	29-717	2-53	8-76	.....	14-2	9-8	2-4	-8	1-1	2-6	2-1	4-7	4-6	4-5	-4	6
August Calf of Man. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... }	58-000	57-757	29-234	29-634	1-74	3-4	.....	13-4	14-2	4-8	-4	2	2-2	3-2	5-6	3-6	2	-6	6-8
	55-935	55-580	29-572	29-572	2-35	13-7	.....	10-4	7	5-1	-6	1-4	3-1	2-1	9	3-4	2-1	-6	4-4
	56-470	56-541	29-562	29-572	1-99	11-2	.....	8-2	13-4	4-2	-5	1-4	1-1	2-2	7-4	2	4-5	-4	6-3
	60-354	58-535	29-918	29-912	2-13	-2	.....	25-2	2-2	1-8	1-8	1-2	1-4	2-4	4-6	3-2	6-2	-2	7-2
	58-412	56-905	30-109	29-926	2-75	13	.....	14	-2	-4	-8	1-2	2	1-2	4-8	6-2	5-8	1-4	6-8
Point of Ayre. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... }	57-837	57-124	29-913	29-915	1-92	7-5	.....	14-4	8-5	-5	1-2	-1	-5	1-4	5-8	4-8	5-7	2-1	7-5
Average for 17 years for the Island ... }	57-834	57-073	29-884	29-755	2-14	8-1	.....	14-2	7-5	2-8	-8	-9	1-2	2-0	4-8	-3	4-3	-8	6-5

	Thermometer.		Barometer.		Rain-gauge.	Rainy days.	Snowy days.	Foggy days.	Clear days.	Direction of the Wind.									
	9 A.M.		9 P.M.							N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	V.
	9 A.M.	9 P.M.	9 A.M.	9 P.M.															
September Calif of Man. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... Ayre. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... Average for 17 years for the Island ....	55-799	55-427	29-617	29-611	2-25	7	.....	8-4	13-6	3-4	-2	-6	3-4	6-6	6	2	2-2	.....	5-6
	52-977	53-019	29-497	29-439	2-81	15-3	4	5-6	7-4	1-3	1-1	3-1	2-1	1-1	8-1	3	4	-6	5
	55-547	55-494	29-496	29-646	1-98	8-4	.....	6-4	16-4	3-1	-7	4	6	2	3-6	3-6	3	-4	5-4
	57-274	56-333	29-904	29-899	2-80	.....	.....	2-7	3	1-8	1-8	-4	3-2	4-6	3-6	6	3-6	.....	5
	54-661	53-806	29-832	29-786	2-77	13	-6	15-4	1	1-8	2-4	2	2-2	2	6-6	5-4	2-2	-2	5-6
	56-118	55-766	29-854	29-909	1-92	10-1	.....	2-6	7-1	-7	3	2-4	7-6	2	4-3	4-9	3-7	1-3	4-6
	55-396	54-974	29-700	29-710	6-92	9-3	-1	7	8-0	2-0	3-2	2-0	3	3	5-8	3-7	3-1	-2	3-3
October Calif of Man. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... Ayre. { 1831 to 1835 ... 1836 to 1840 ... 1841 to 1847 ... Average for 17 years for the Island ....	52-365	52-580	29-538	29-540	2-46	3	.....	12	11	1-6	.....	-8	4-2	4-8	7-2	5	4	.....	3-8
	49-522	49-159	29-559	29-560	2-13	15-1	-8	8	7-2	1-5	2-6	.....	2-8	2-5	7	4-8	5-4	.....	4-2
	49-347	49-394	29-432	29-427	3-36	15	4	14	12	3	1	1	3	2	3	3	.....	4	4
	50-896	52-748	29-918	29-858	3-38	.....	1	28	2	1	-4	-6	2	3-2	8-6	5-6	6-4	-2	3
	50-438	49-993	29-993	29-916	2-64	11-4	1	14	4-2	1-2	2-6	1	1-4	2	6-2	6-2	5-2	.....	5-2
	50-037	51-895	29-747	29-733	4-15	13-3	1-7	8-7	7-1	2-7	1-3	1-8	2-4	1-3	4-4	6-1	4-4	.....	3-7
	50-439	50-944	29-697	29-672	3-2	9-1	1-4	14-1	7-7	1-7	1-3	-8	2-3	2-6	6-7	4-9	4-2	.....	4

November Calif of Man. Ayre. Point of	1831 to 1835 ...	46-337	46-888	29-321	29-411	3-22	6	4	12	11	2	1	1	4	2	5	3	5	.....	3
	1836 to 1840 ...	45-979	45-466	29-216	29-233	2-87	16-6	1-6	6-6	5-2	4	2-2	2-2	5-4	1-4	4-6	5	6	2	6
	1841 to 1847 ...	46-521	47-115	29-353	29-356	3-02	13-4	4	5	11-7	1-9	8	2-3	6-4	1-6	4-9	3-3	3-6	3	5-6
	1831 to 1835 ...	46-825	46-953	29-828	29-753	4-03	8	8	26-2	2-2	2	1-6	8	4-8	2-6	5-6	3-8	4-8	2	3-8
December Calif of Man. Ayre. Point of	1836 to 1840 ...	44-069	45-326	29-563	29-578	3-92	14-2	3-6	10	2-8	1-2	1-2	3	3-4	3-4	4-2	3-8	5	2	5
	1841 to 1847 ...	46-227	46-780	29-731	29-720	1-44	1-4	5	12	4	1-1	2-4	1-8	3-4	2-4	5-2	1-1	7	1	6
	Average for 17 years for the Island ....	45-993	45-421	29-502	29-515	2-08	8-5	1-2	6-9	3-9	8	1	1-2	3-9	1-7	4-1	2-6	1-7	1	1-8
November Calif of Man. Ayre. Point of	1831 to 1835 ...	45-419	45-792	29-573	29-584	2-32	5-6	4	1-3	1-2	2-2	1-8	.....	2-4	1-6	7-4	6-8	4	.....	4-8
	1836 to 1840 ...	42-674	43-191	29-634	29-555	2-30	15	1-1	7-1	7-2	1	2-2	2-4	6-8	4	6-4	2	2-8	2	3-2
	1841 to 1847 ...	43-460	43-963	29-410	29-412	1-60	19	1	8-3	1-8	3-3	3	1-6	7-4	2-5	5-6	7	6-2	5	5-2
	1831 to 1835 ...	45-521	45-625	29-843	29-870	2-77	1-2	8	27-8	1-2	1-2	1-4	1-2	1-6	2-2	6-8	6-2	5	2	5
December Calif of Man. Ayre. Point of	1836 to 1840 ...	42-638	43-083	29-835	29-841	2-83	11-6	1-8	14-8	2-8	1-2	2-8	2-4	4-6	3-8	4-4	3-8	3	2	4-6
	1841 to 1847 ...	43-836	43-212	29-811	29-804	2-72	11-2	2-4	12-7	4-5	2-5	5	2-5	4-7	1-1	7	4-5	4	7	3-4
	Average for 17 years for the Island ....	43-974	44-144	29-684	29-677	2-42	5-5	1-1	11-9	3-1	1-7	1-5	1-6	4-5	2-6	5-1	3-7	1-7	1-3	3-6

**TABLE V.**—*Table of Mean Monthly and Annual Temperatures for a period of Twenty-five Years, from 1823 to 1847 inclusive.*

	Calf of Man.		Point of Ayre.		Temperature for the whole Island.		Total mean Insul. temp. 1823-47, Fahr.
	Average 1823-30.	Average 1831-47.	Average 1823-30.	Average 1831-47.	1823-30.	1831-47.	
December	43·768	45·083	44·931	45·652	44·349	44·029	
January ...	40·161	41·120	41·493	40·845	40·827	40·982	
February...	41·327	40·567	42·323	40·929	41·825	40·739	
Winter temp. }	41·752	42·257	42·918	42·475	42·364	41·583	41·953
March.....	42·675	40·318	44·088	43·277	43·381	42·382	
April .....	44·712	44·947	46·927	45·112	45·819	45·031	
May .....	50·028	47·469	51·784	50·488	50·916	49·884	
Spring temp. }	45·805	44·245	47·600	46·292	46·705	45·766	46·236
June .....	54·367	53·617	56·370	54·601	55·868	54·043	
July .....	56·957	55·335	58·466	57·380	57·711	56·357	
August ...	57·320	56·713	58·335	58·194	52·827	57·357	
Summer temp. }	56·215	55·222	57·724	56·692	55·469	55·919	55·694
September	54·335	54·709	56·996	55·659	55·665	55·206	
October ...	51·824	50·891	52·976	51·001	52·400	50·691	
November	47·433	46·384	48·489	46·030	47·961	45·707	
Autumnal temp. }	51·197	50·661	52·817	50·897	52·013	50·535	51·274

Hence the mean annual temperature of the Isle of Man, taken for a period of 25 years, from 1823 to 1847 inclusive, is 48·789 Fahrenheit = 9°·27 Centigrade thermometer.

TABLE VI.—The following Table shows the Coldest Day in each of Twenty-one successive Years, with the Temperature at 9 A.M. and 9 P.M., together with the state of the Weather on those Days at the Calf of Man and Point of Ayre.

	Calf of Man.				Point of Ayre.			
	Coldest day.	Therm. 9 A.M.	Therm. 9 P.M.	State of Weather.	Coldest day.	Therm. 9 A.M.	Therm. 9 P.M.	State of Weather.
1823	Jan. 25	28	28	E.S.E. Gale. Snow .....	Jan. 25	30	32	E. Gale and clear.
1824	— 15	38	36	N. Strong breeze. Clear .....	Mar. 3	39	35	N.E. Gale. Clear.
1825	— 12	34	34	W. Light airs. Haze .....	Feb. 4	33	31	N.W. Gale. Snow.
1826	— 9	32	35	E.N.E. Light airs. Clear .....	Jan. 13	36	29	N.E. Breeze. Clear.
1827	— 3	29	27	N.N.E. Breeze. Snow .....	— 3	30	31	N. Light airs. Clear.
1828	— 10	31	31	E. Breeze. Clear .....	— 10	32	32	E. Breeze. Clear.
1829	— 24	28	30	N.E. Breeze. Clear .....	— 24	28	32	E. Breeze. Haze.
1830	Feb. 6	27	30	S. Gale. Snow .....	Feb. 6	26	27	S. Gale. Snow.
1831	— 1	26	31	E. Gale. Snow .....	Jan. 16	30	34	S.E. Breeze. Haze.
1832	Jan. 27	31	36	N.N.E. Breeze. Clear .....	— 27	34	37	N. Breeze. Clear.
1833	— 22	35	37	Var. Breeze. Clear .....	— 16	33	35	S.E. Breeze. Haze.
1834	Mar. 25	39	40	N. Breeze. Clear .....	— 28	35	46	N.E. Breeze. Haze.
1835	Jan. 20	33	36	Gale, N.W. to N. Haze. Snow ..	— 20	32	37	N. Breeze. Clear. Frost.
1836	— 11	33	37	Var. Light breeze. Clear .....	Dec. 26	30	31	N.E. Breeze. Snow.
1837	Mar. 23	33	30	N.E. Breeze. Snow and hail ...	Jan. 11	31	34	Calm and haze. Hard frost.
1838	Feb. 10	29	33	Var. Breeze. Clear. Snow .....	— 19	28	27	E. Breeze. Cloudy. Snow.
1839	Jan. 9	31	30	S.S.W. Breeze. Sleet. Rain. Fog	Mar. 31	31	29	N.E. Breeze. Hail shower.
1840	Feb. 22	32	33	S.E. Light breeze. Haze .....	Feb. 22	30	35	S.E. Light breeze. Haze. Frost.
1841	— 7	26	28	S.E. Light breeze. Haze .....	— 8	31	31	E. Breeze. Clear. Hard frost.
1842	Jan. 10	32	33	S.E. Light breeze. Haze. Snow	Jan. 10	30	30	S.E. Breeze. Snow. Frost.
1843	Feb. 15	28	32	N.E. to N.W. Light breeze. Clear	Feb. 15	27	31	N.W. Breeze. Cloudy.

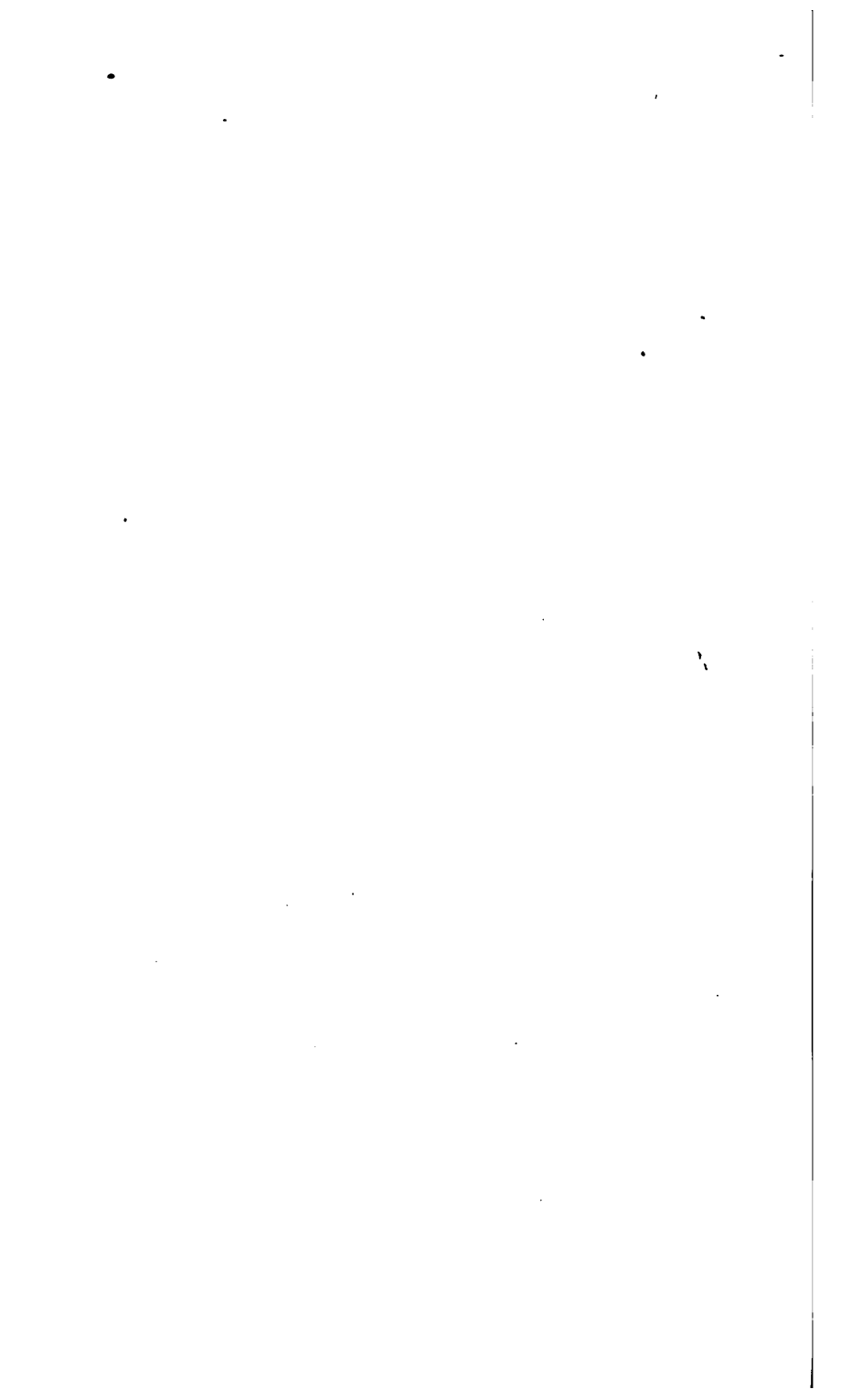
TABLE VII.—*The following Table shows the Hottest Day in each of Twenty-one successive Years, with the Temperature at 9 A.M. and 9 P.M., together with the state of the Weather on those Days at the Calf of Man and Point of Ayre.*

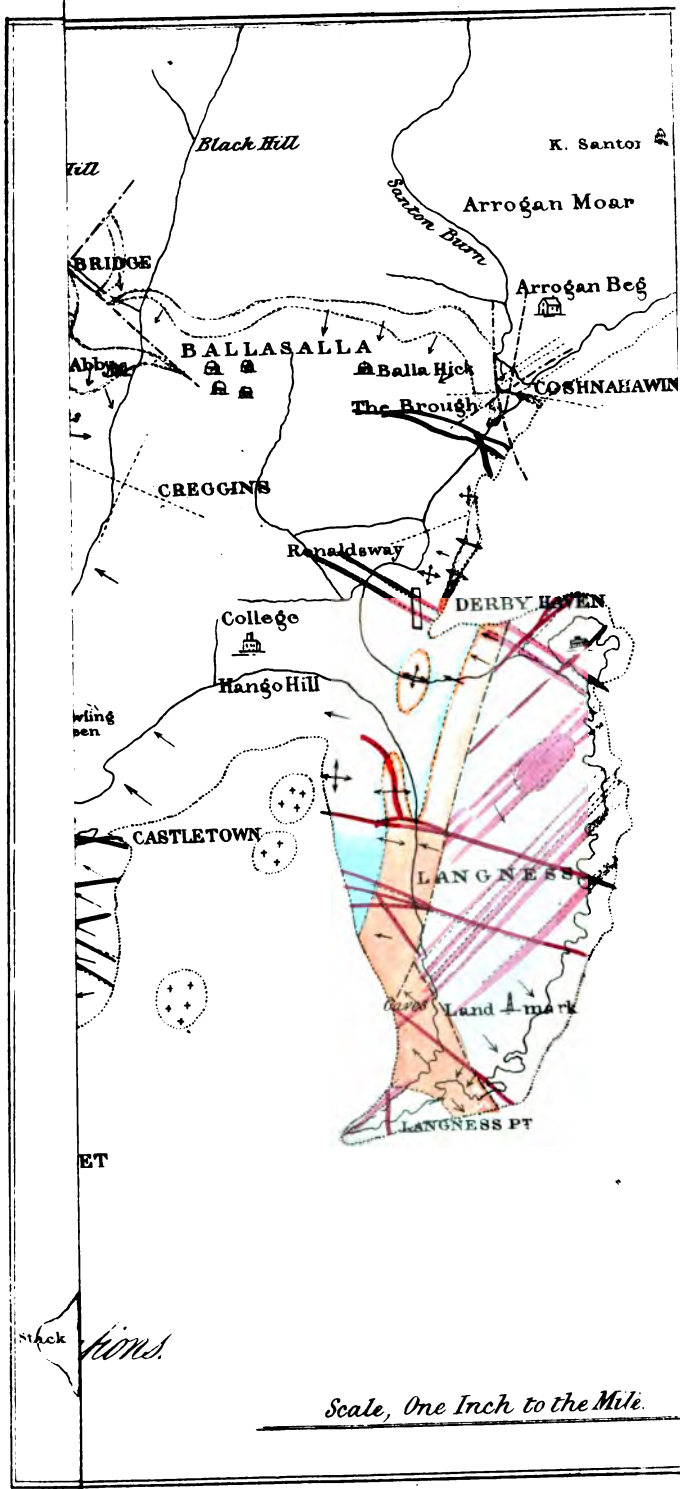
Calf of Man.				Point of Ayre.				
	Hottest day.	Therm. 9 A.M.	Therm. 9 P.M.	State of Weather.		Therm. 9 A.M.	Therm. 9 P.M.	State of Weather.
1823	Aug. 9	65	55	Var. Breeze. Clear .....	July 1	62	61	S. Light airs. Haze.
1824	— 2	65	59	Var. Light airs. Fog .....	Sept. 2	68	63	S. Breeze. Haze.
1825	— 18	70	76	Var. Calm. Clear .....	Aug. 1	72	65	Var. Light airs. Haze.
1826	June 25	70	74	Var. Calm. Clear .....	July 1	73	66	S.E. Breeze. Foggy.
1827	July 14	70	68	E. Light airs. Haze .....	— 28	67	65	W. Breeze. Haze.
1828	Aug. 29	67	70	S. Light airs. Clear .....	Aug. 29	67	67	S.E. Breeze. Haze.
1829	July 22	60	60	S.W. Breeze. Haze .....	July 28	66	57	S.E. Breeze. Haze.
1830	— 28	68	67	Var. Light airs. Clear .....	— 28	66	69	S.E. Breeze. Haze.
1831	— 31	67	69	E. Light airs. Clear .....	— 31	69	68	S.E. Breeze. Haze.
1832	— 31	62	60	Var. Light airs. Clear .....	Aug. 9	67	61	S.W. Breeze. Clear.
1833	— 8	62	61	N.N.E. Breezes. Clear .....	July 16	66	61	N.W. Breeze. Haze.
1834	— 30	70	71	N. Breeze. Clear and fog .....	— 12	68	66	S. Breeze. Haze.
1835	Aug. 1	65	61	S.W. Breeze. Clear. Haze .....	June 9	67	58	Var. S. airs. Haze.
1836	— 12	65	62	Calm. Light airs. Haze .....	July 5	66	62	Var. Breezes. Cloudy.
1837	July 25	66	56	Calm. Haze. S. breeze .....	Aug. 18	68	63	Calm and hazy.
1838	June 26	60	52	Var. Light breezes. Calm. Haze	— 11	66	60	S.W. Breezes. Haze. Rain.
1839	May 31	59	60	E. Breeze. Clear and haze .....	— 23	63	59	Var. Breezes. Rain.
1840	Aug. 9	70	61	S.S.W. Light breeze. Calm. Haze	— 9	66	66	Calm and hazy.
1841	May 27	67	63	E.S.E. Strong breeze. Clear and haze	— 26	63	64	S.W. Breezes. Haze.
1842	June 12	68	72	Var. Light airs. Calm. Haze .....	— 13	65	65	S.W. Breezes. Cloudy.
1843	Aug. 19	65	70	Var. Light airs. Calm. Haze .....	— 19	66	66	Var. Light airs. Haze.

THE END.

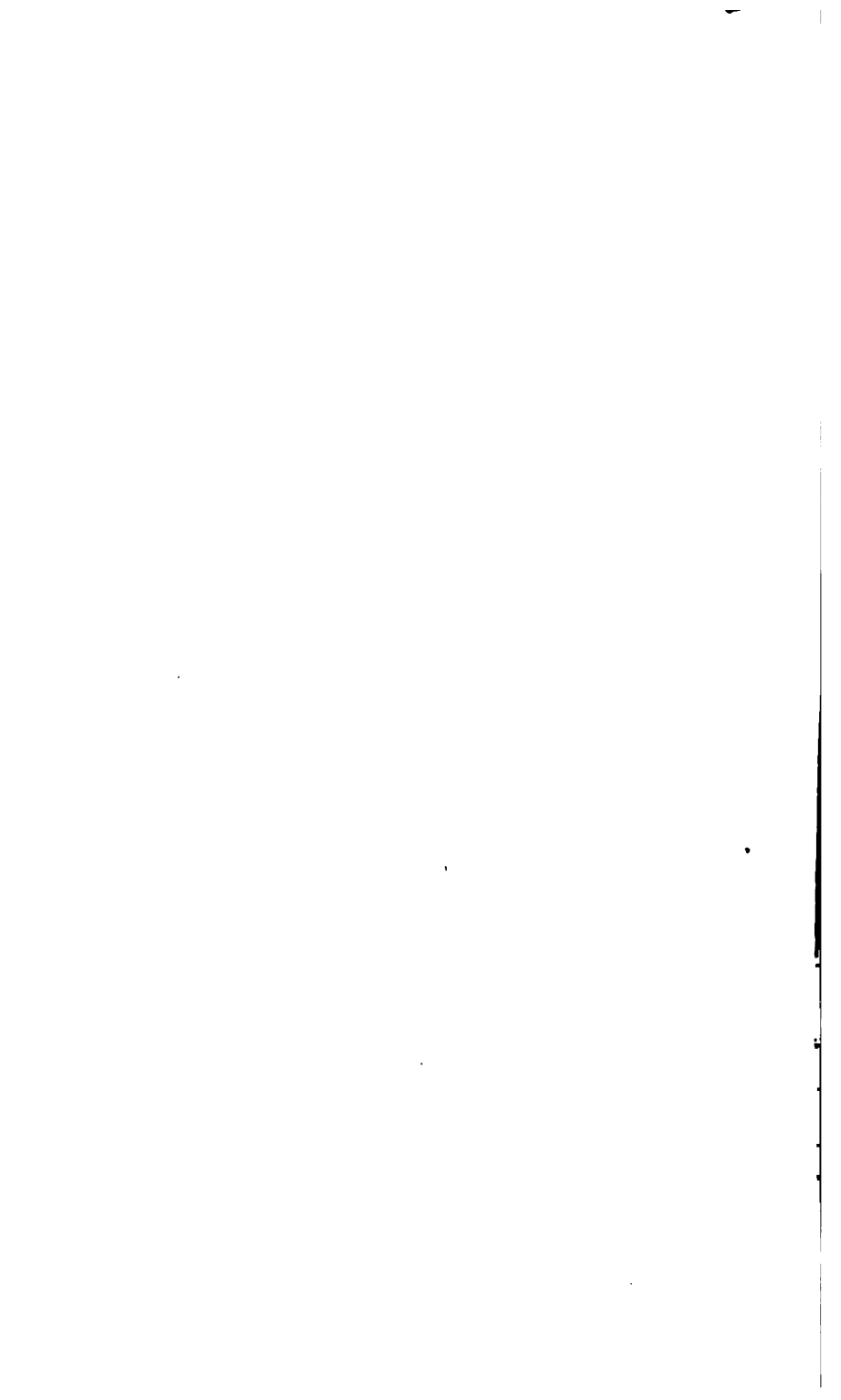


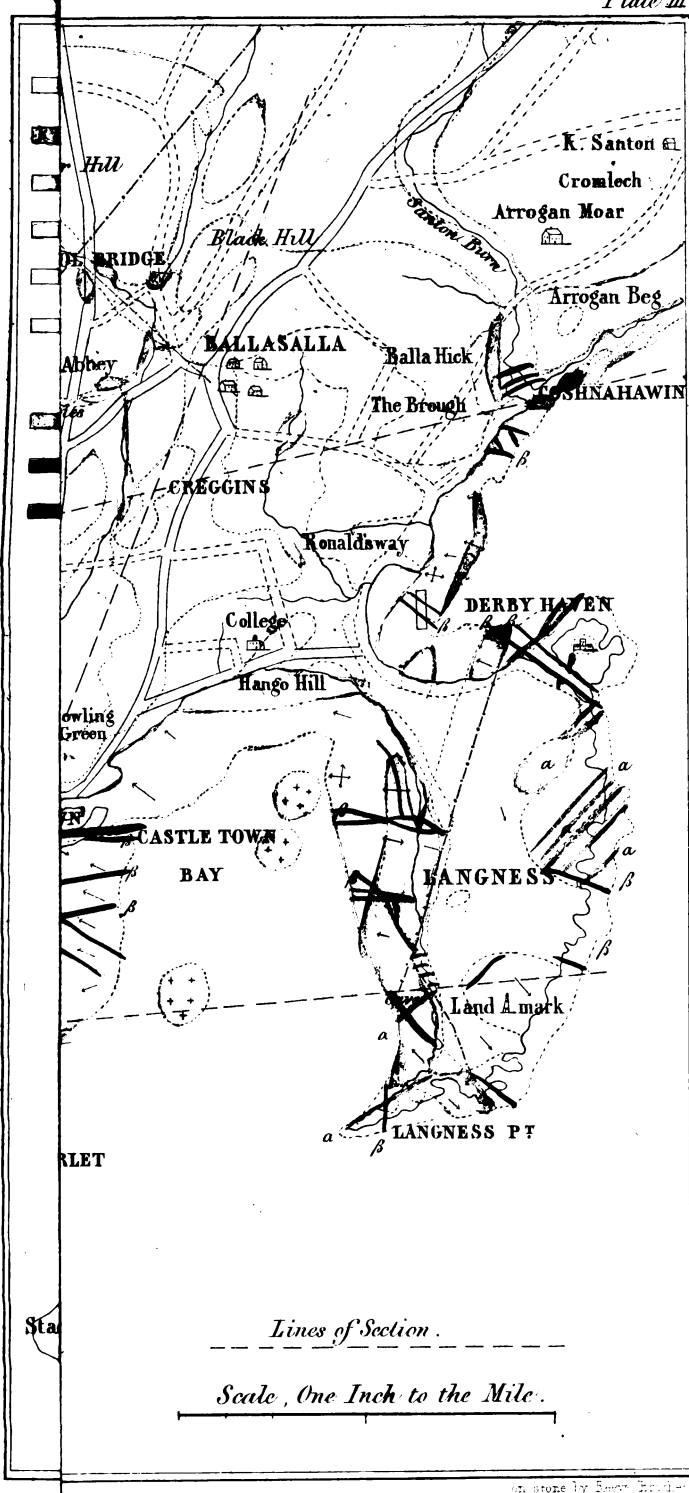






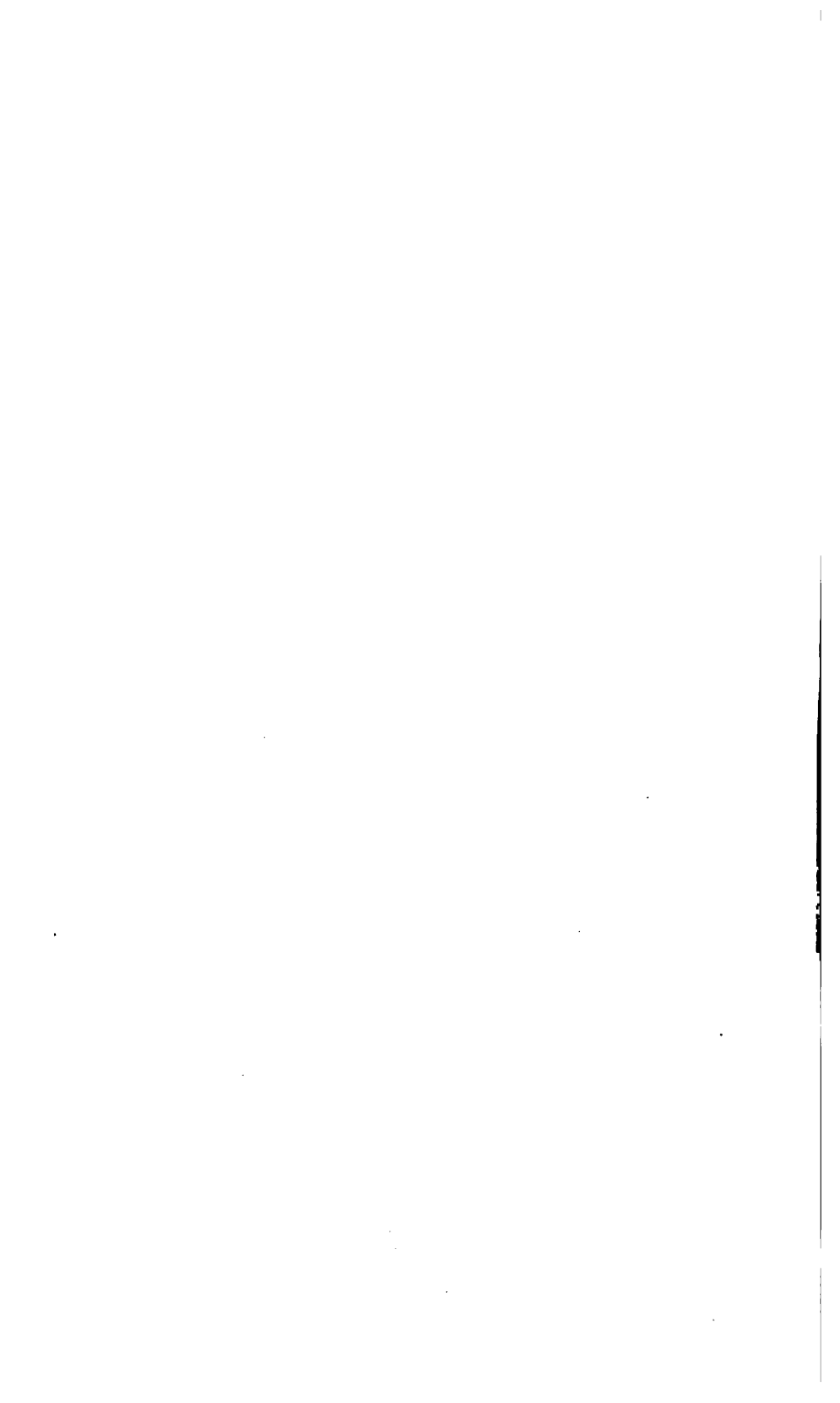
Scale, One Inch to the Mile.





Lines of Section.

Scale, One Inch to the Mile.



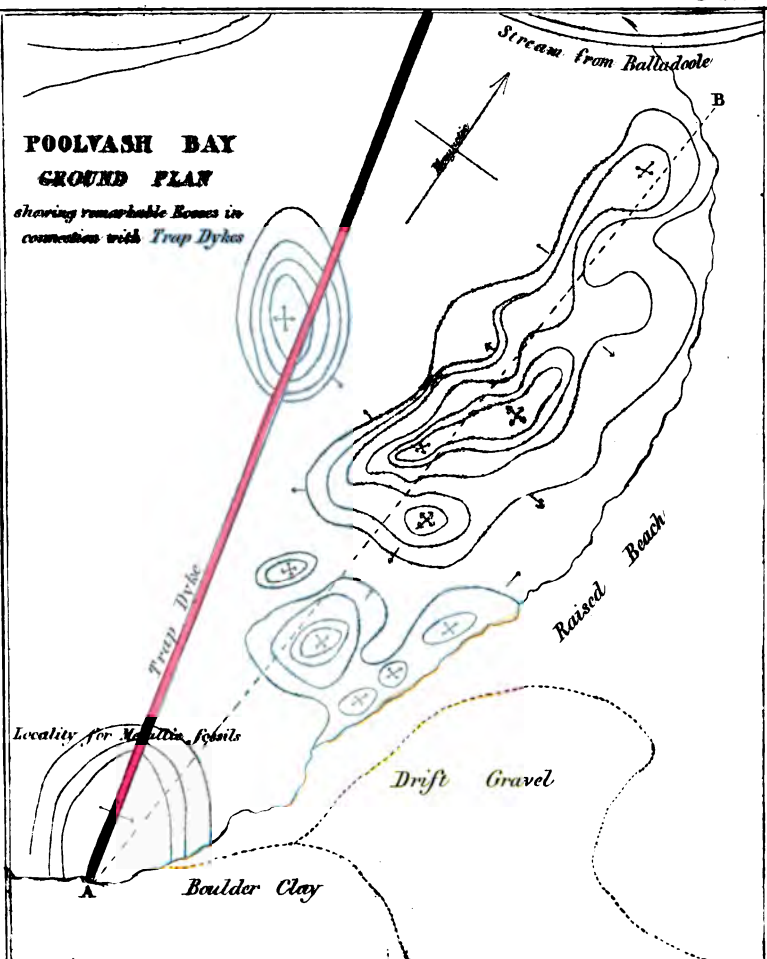


*This Map taken from Spard's History of Great Britain exhibits ancient lakes both in the North & South of the Island which have since been drained*



# **POOLVASH BAY GROUND PLAN**

*showing remarkable Bases in  
connection with Trap Dykes*

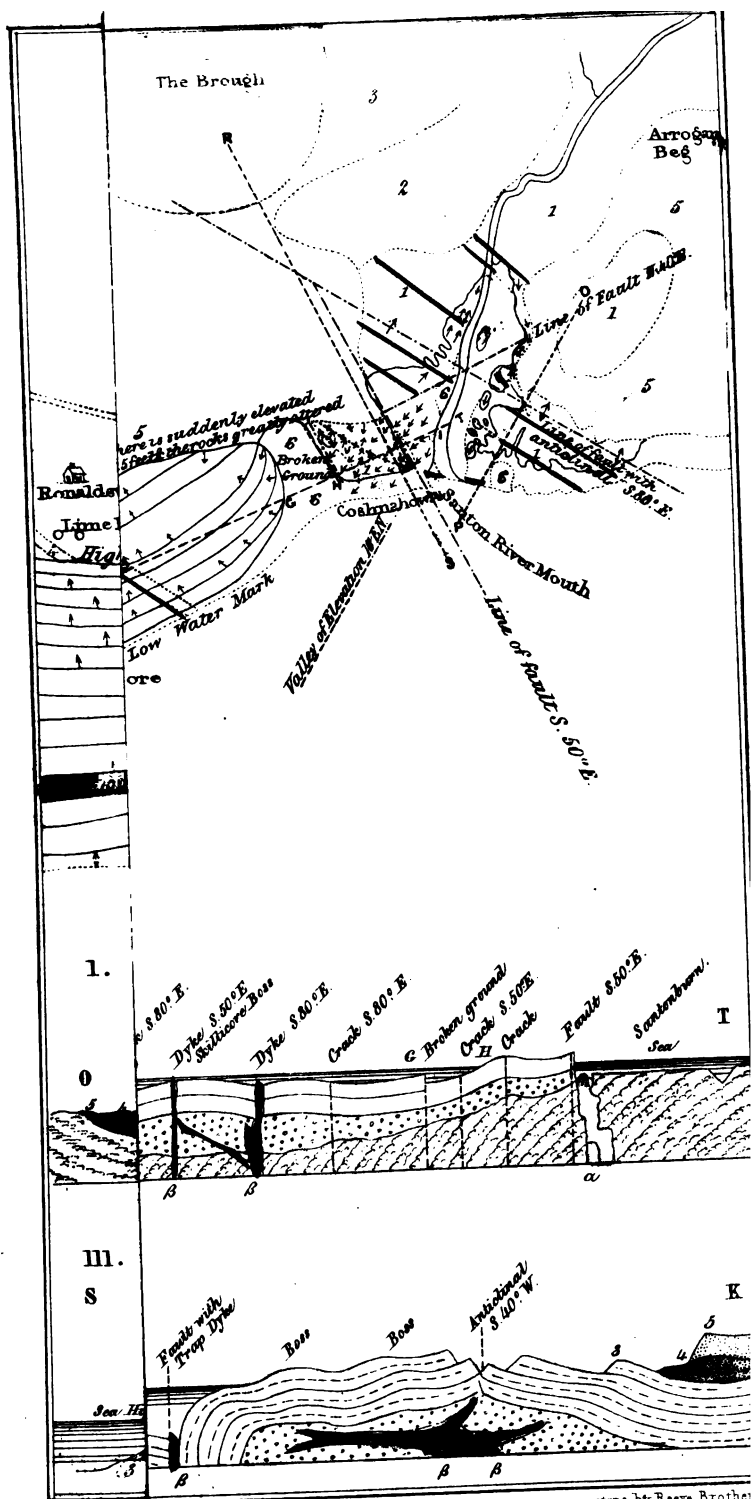


**Section from A to B in the above Plan**  
*Shewing the undulations caused by the protrusion of Trap*



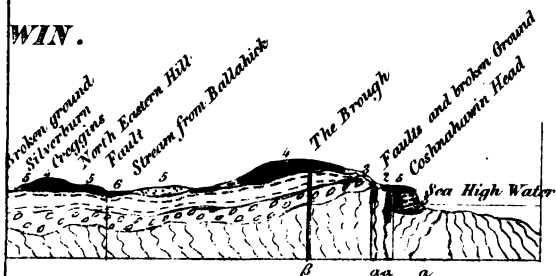




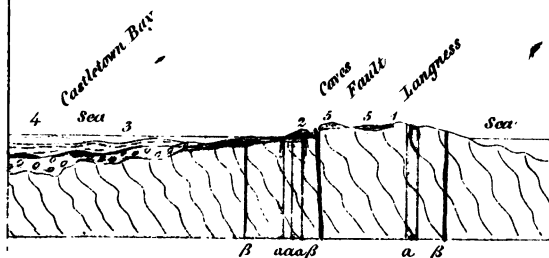




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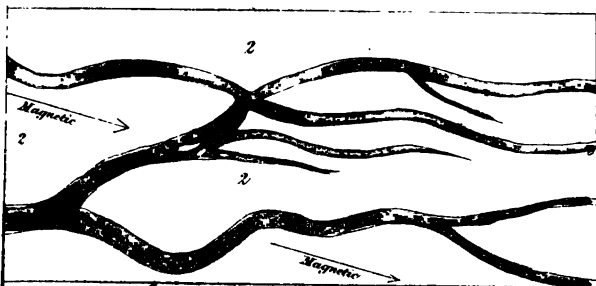


# GROUND PLAN OF A TRAP DYKE

on the North West side of

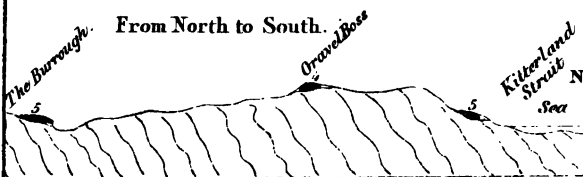
LANGNESS.

30 Yards to the Inch.



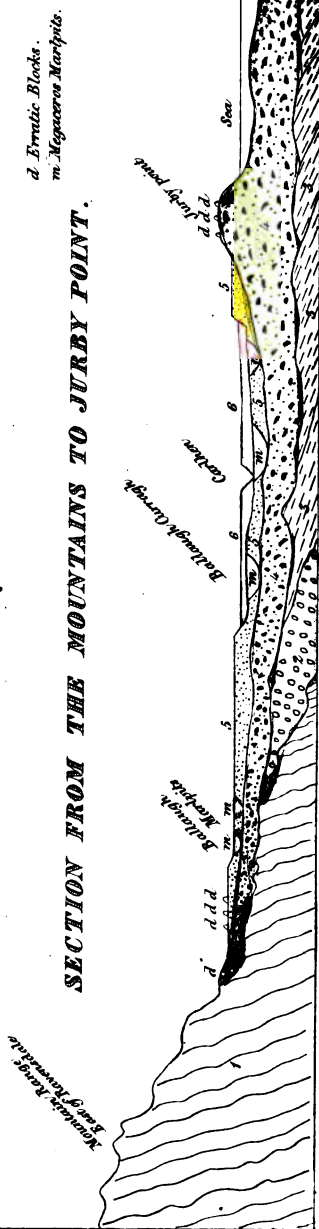
# SECTION AT THE CALF ISLET

From North to South.

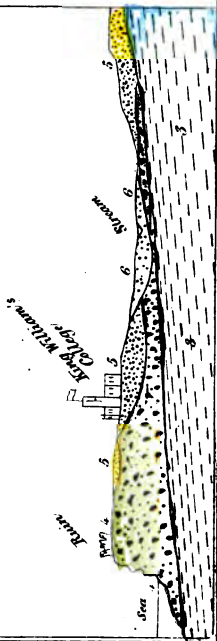




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